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The Kansas Industrialist

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Number 4

CORN TO RESIST DROUTH.

CHINA MAY KNOW THE SECRET FARMERS AND SCIENTISTS SEEK.

Botanists in the Kansas State Agricultural College Conducted Breeding Experiments This Summer With a Remarkable Stranger.

Every farmer in every semi-dry country in the world, probably, has hoped that, some day, he should have a drouth-resisting variety of corn. Heretofore this hope has been like the alchemist's dream of gold, but it may be fated now to be realized. And far away China may have solved the problem or at least have sent over the key that shall unlock the door to greater possibilities in breeding this cereal.

The botanical department of the agricultural college has been engaged this summer in making hybrids between a remarkable drouth-resistant corn from China, imported by the United States department of agriculture. Plants of this corn were crossed with plants of six different short-seasoned varieties of western corn. The crossing experiments were highly successful and a good number of the hybrid ears were obtained.

BUT IT MAY TAKE YEARS.

It will take several years growing of the different hybrids before it is known which of them will be best to preserve. Much is hoped for from this experiment, as the Chinese corn is very remarkable in its characters. These characters are altogether different from those of any of our American cultivated races. A little later, when the department feels more assured of its experiments, a more detailed description will be published. At present it is enough to say the Chinese corn is sufficiently unusual in its structure to convince one that even in heathen China an All Wise Providence was concerned in providing a plant wonderfully made to defy hot winds and scorching sun.

CAN THE BOTANIST DO IT?

If the botanists of the agricultural college shall succeed in their efforts to preserve the broad, sheltering leaves of the Chinese corn, with its sturdy qualities, and at the same time increase the size of the kernel and the ear to the Kansas standard, then indeed will the farmers have a monopoly.

The botanical department continues its excellent work in originating pure-bred races of wheat, has this year put into the field eighteen plots of seed to increase for distribution, and over thirty plots of smaller size for yield tests. All this wheat consists of pure-bred strains of the best Turkey Kharkof and other hard red wheat varieties.

HOW MANY SENT WALNUTS?

Letters Indicate State-Wide Interest in the Tree-Planting Week.

It would be interesting to know how many boys joined in the first activities of "Walnut Week," October 17. But nothing definite may be recorded for weeks after the final day—November 5. By that time the school superintendents in many western counties will have received the nuts sent from the eastern counties, where nuts and trees are plentiful. Along in the latter part of the month they will begin to report to J. H. Miller, superintendent of the extension department in the Kansas State Agricultural College, who promoted the state-wide agitation for "Walnut Week." Many letters received by Mr. Miller indicated, however, that the plan was a complete success.

Charles A. Scott, state forester stationed at the college, gave "Walnut Week" his full support and supplied advice as to planting the nuts and caring for the trees that are expected to follow. Hardly had the project

been announced in the papers before letters began to arrive. Here is one received by Mr. Scott a few days ago:

I have read with considerable interest your suggestions of a plan whereby Western Kansas may be supplied with walnut trees. My boys will gather walnuts and will have them in readiness to ship, should we hear from Wallace County.

We have had a little experience in planting walnuts. My children spent their vacation at our ranch in Wallace County two years ago and planted a walnut at every fence post surrounding the house. Nearly all these nuts grew and the trees are still living. They now measure from one to two and one-half feet in height.

We have planted about a bushel this fall in the same way. It seems to me that it will be easy to take care of the trees and protect them from being trampled upon when planted in this way, near the posts. We know the time will not be wasted. I am glad you have started this work. It will be a wonderful help to the western part of our state in a few years.

(Signed) Albert Wulfekuhler.

Mr. Scott says the walnuts should be mulched lightly with hay or straw as soon as they come up. This will prevent the soil from drying immediately around the trees and will keep down grass and weeds.

Contrary to the opinion of some persons, hulling the walnuts before planting will not affect their growth, the forester says, unless the nuts are too dry when planted. The hulls will prevent drying, but they are not necessary if the nuts are put into the ground while fresh.

GAS MADE FOR FORTY CENTS

With Low-Grade Coals This Cost Can Be Reduced One-Half.

Gas can be made, from the highest price bituminous coal, for not to exceed forty cents a thousand cubic feet. Experiments conducted in the engineering department of the Kansas State Agricultural College have proved this. Furthermore, the tests showed this cost, with low-grade coals, can be reduced one-half.

To utilize this gas effectively, the college found it necessary to design a new type of burner and modify materially the connections ordinarily employed in gas plants. When the investigations under way in this line at the college are completed, gas will be available to every public institution and small village at a nominal cost.

A Twentieth Century School.

From the Kansas City Star, October 13.

The announcement that the Kansas State Agricultural College will send a special train through the state next week, for the purpose of carrying instructors from the agricultural college to tell the farmers how to improve and increase the pork production of that state, is in line with the best purpose of such an institution. An agricultural college should be utilized for something more than the education of the children of the farmers. It should educate the farmers themselves in every branch of agriculture. As the farmers cannot be brought to the college, the college must be taken to the farmers.

The same effort should be made to instruct the farmers how to improve and increase the production of all the products of the soil—not by occasional visits and conferences, but by systematic efforts that will reach every farmer in the state. The agricultural college ought to be the biggest factor in the scientific development of the farm industry of Kansas.

Kansas is fortunate in having men in charge of its agricultural college who are ambitious to make it a school that will enroll every farmer as a student of twentieth century farm methods.

Meets this Year 350.

The college cadet corps will have an enrolment of about 350 this year. Six companies have been organized and the work has begun in earnest.

HOPE FOR THE CITY MAN

WITH FIVE ACRES AND BRAINS HE MAY BECOME INDEPENDENT.

A K. S. A. C. Student Writes Upon An Interesting Subject—A Laundry Wagon Driver and His \$160 Ear of Corn.

This little story was written by C. L. Rose, a student in the department of industrial journalism. He was country bred, is working his way through college. His article is worthy of attention.

Farming offers good inducements to the city-bred man, of small or moderate means, who must make his living. He and his family will meet difficulties in making the change from a city occupation to farming, but there will be many advantages in farm life to offset all difficulties encountered. He may be his own boss and lead an independent life. He will not be subjected to the whims of the man higher up and can not be turned off because of illness or age. Second, he may produce nearly all of the food necessary for himself and family. He may have a good garden, an orchard, poultry, cows and pigs, and grow his own bread. If his wife and daughters know how to prepare food and are frugal the cost of living will be very small and the standard of living higher than would be possible in the city.

FIVE ACRES TO START.

The amount of capital needed will vary with the magnitude of the undertaking. It would be well, perhaps, for a man having no farm experience to begin in a small way as a gardener in the suburbs. A five- or ten-acre tract probably would be large enough for the start, although many men have been successful on smaller tracts. As experience is gained the industry may be enlarged, or a different type of farming taken up, such as grain farming or dairying.

The man without farm experience should not attempt to start in the business on an elaborate scale, for he probably will fail. Care should be taken to buy nothing not absolutely essential until the farm begins to pay.

FOR AN EAR OF CORN \$160.

The income from the farm will depend on many things, such as climate, character of crops grown, kind of live stock kept, and extent of the farming operations. A few instances of success will show what can be done. From a half-acre of hillside land in Eastern Kansas William Brown sold \$200 worth of red raspberries and \$18 worth of plants. He also sold from the same half-acre \$50 worth of strawberries and \$12 worth of strawberry plants, making a total of \$280 from the half-acre in one season. From six acres of apples and peaches adjoining Brown received less gross returns.

At the Iowa State Corn Show in 1909 the grand championship ear of corn sold for \$160. It was grown by a farmer who, ten years before, was a driver of a laundry wagon in Des Moines.

In western Kansas many farmers have paid for their farms with the wheat grown in one year. A one-armed man from Iowa went in debt for a farm in Decatur County, Kansas, against the advice of friends. He made a specialty of hogs and alfalfa and is now financially independent.

In nearly every community the neighbors will gladly give information as to time of planting and harvesting, when the soil is in proper condition for working, etc. The farm and stock papers contain much information. There are journals devoted to gardening, fruit growing and the like. It is important that these papers be published in the part of the country where the beginner makes his start. He will thus get reliable information adapted to his section of country. The United States department of agriculture publishes many bulletins that may be

had free by writing to the secretary of agriculture, Washington, D. C.

Farmers' Bulletins Nos. 242 and 355 should be obtained, also Yearbook Separate 509 entitled "Farming as an Occupation for City-Bred Men," by W. J. Spillman, of the bureau of plant industry. Many agricultural colleges offer excellent short courses of ten or twelve weeks and also conduct a correspondence school of agriculture. The cost of either is nominal. In Kansas the agricultural college gives especial attention to these matters.

The beginner must expect to meet hardships and difficulties while he is learning the business, but he will be amply rewarded, and when once established nothing can induce him to return to the dusty, smoke-laden atmosphere of the city. As an independent farmer he will be "lord and master of all he surveys."

October Suggestions In Brief.

October is the time to plant every kind of bulb, root and tuber.

Rake up the fallen leaves and use as a mulch for flowers and shrubs.

Clean up and burn diseased plants, manure the garden, plow for spring planting.

Burn asparagus tops and manure the bed. Also manure new asparagus and rhubarb beds and plant sets of extra early onions for use next month.

CAN SYMBOLEER WIN AGAIN?

Twice International Champion, the Angus Steer Will Try a Third Time.

Symboleer, the Angus champion steer, and other aristocratic cattle from the Kansas State Agricultural College, will be shown in the International Live Stock Exposition next month in Chicago. Symboleer and his record are particularly interesting in one respect; that is, that the animal was bred at the college and fed there by the college students. Indeed, nearly all the cattle to be shown by the college at Chicago are college bred, a very important point.

Symboleer was the champion calf at the International at Chicago two years ago. He was the champion yearling last year in the same show, and the reserve grand champion of America. Symboleer was grand champion last year and this year at the Interstate Fat Stock Show in St. Joseph, and he was the champion of his class last year and this year at the American Royal in Kansas City, giving him a record of winning the highest honors every time he has entered the ring.

No steer except Symboleer has ever won two championships in the International. Symboleer has won two and is in the running for the third. This fine animal is two years old now, and weighs 1,730 pounds. Fed by the students of the Kansas State Agricultural College, he is a living demonstration of what there is in Kansas corn and alfalfa.

A DRAINAGE EXPERT FREE.

The College Will Send H. B. Walker Upon Payment of His Expenses.

One of the important works in bringing the Kansas State Agricultural College closer to the people is that done by H. B. Walker, of the extension department, in the interest of drainage. Mr. Walker is thoroughly trained in this sort of work. It is his business to visit farms where drainage may be needed, and to instruct the farmers, telling them what is needed and how to supply the deficiency. Also, he will supervise the laying out of drainage districts, if farmers care to organize as they do in some other states, and will undertake the direction of work necessary to straighten crooked streams. All this service the college supplies free, except for the payment of Mr. Walker's expenses.

A PLEA FOR MORE HOGS.

COLLEGE EXPERTS ARE LECTURING THIS WEEK TO FARMERS.

The "Pork Production Special" on the Rock Island is Carrying Through Kansas a Message of Encouragement—Cholera Not a Dread.

HERINGTON, KAN., ON BOARD THE K. S. A. C.-ROCK ISLAND "PORK PRODUCTION SPECIAL," OCTOBER 18.—If farmers in Kansas do not take heart again and return to the hog industry it will not be the fault of the agricultural college, the Chicago, Rock Island and Pacific railway, or of science. The college is supplying the lecturers this week to tell the farmers what to do and how to do it; the railroad is hauling them through the state wherever it has lines—and science has provided the means whereby the hopes of farmers, lecturers and the railroad may be realized. The lecture tour is scheduled to end Saturday night, probably at Sabetha. Crowds of from 25 to 120 have met the train at every advertised stop.

The notable decrease in hog receipts at five or six of the country's great markets in the last few years has drawn attention sharply to a situation that called for action. In the cities consumers of pork have been told that high prices were due to the high price of corn. It was the easiest way for the packers and butchers to dispose of a troublesome question. But corn and its price have mighty little to do with it. High prices have been due and are due to a scarcity of hogs; and the scarcity was due and is due to a disposition on the part of farmers to go out of the hog business—for these reasons!

Inability of farm tenants to equip rented properties with necessary facilities.

The temptation to sell corn and alfalfa instead of feeding them on the farm.

Cholera, and a reluctance or inability to avail themselves of the scientific means to prevent it.

The college is represented on the special train, this week, to explain and give advice to remedy these conditions, by these members of the faculty: R. J. Kinzer, G. C. Wheeler, Dr. F. S. Schoenleber and Dr. K. W. Stouder. President Waters traveled with the train for several days. The railroad is represented by H. M. Cottrell, industrial commissioner. Jay Neff, former mayor of Kansas City, Mo., owner of the *Drovers' Telegram*, and I. D. Graham, of the *Kansas Farmer*, are reporting the events of the trip for their papers. The *Topeka Capital* sent A. G. Kittell. Charles Dillon is writing the story for the *Kansas City Star* and the Associated Press.

A DAIRY SPECIAL OCTOBER 31.

Lectures in Santa Fe Territory to Stir Interest in the Industry.

More cows, more milk, more cheese and more cream are needed in Kansas. Farmers do not realize the money to be made in scientific dairying. It is a neglected industry in this state. To increase the interest in it a dairy special, supplied with lecturers from the Kansas State Agricultural College, is to leave Newton October 31 for a five-days trip over the Atchison, Topeka and Santa Fé railway. This train will run over nearly all the branches and stubs and most of the main line owned by the company in Kansas. The trip will end at 2:30 Saturday afternoon, November 5, at Marion, Kansas. Special attention is to be given to southwestern Kansas, known as the "short grass country." The train will go as far west as Syracuse. The lecturers will describe the possibilities of a certain income from high-bred cows, and also will tell how silos are built and how they should be managed.

THE KANSAS INDUSTRIALIST

Issued weekly during the college year by the Kansas State Agricultural College, Manhattan, Kansas.

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The typesetting and other mechanical work is done by students in the school of printing, of which J. D. Rickman is superintendent. Both of these departments are in Kedzie Hall.

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IN RETROSPECT.

The first number of THE INDUSTRIALIST appeared April 24, 1875. That is a long time ago in America and particularly in the Middle West. Thirty-five years' service at one stand does not, in Europe, entitle one to any mark of distinguished approval. In this country—in Kansas—that period covers the whole interesting and mightily encouraging transition from prairie-dogs, sod houses, buffalo robes and Indians, to a position first in wheat and other good things, and second in nothing that is needed to make the state the most talked of in the union. Thirty-five years is a long lifetime, but, after all, how short a period for so much to have happened?

In 1875 John A. Anderson was president of the Kansas State Agricultural College and, ex-officio, managing editor of THE INDUSTRIALIST. The principal editorial, printed upon the first page of the little, three-column paper, discussed "the hateful grasshopper," described by Prof. J. S. Whitman as "hatching in considerable numbers on the south slope of the bluff near the college." Old-timers will never forget the "grasshopper year." Another article urged the farmers to plant alfalfa, a forage crop just then becoming popular in California and a few other states. Kansas was raw and rough and having hard times. Looking at it as a straight business proposition there was nothing especially attractive to keep men and women in the state. The wind and the weather, usually together, in those days, seemed against everything and everybody.

And now look at Kansas! And, if the invitation be properly modest and dignified, will you please look at THE INDUSTRIALIST! Through all those thirty-five years a faithful people, strong in the confidence that their state was meant for great things, went bravely on about their business of this or that. The farmers planted and sometimes reaped; a few, of little heart, went back to "God's country," as they called some region east of the Mississippi, but here and there, from Hamilton county to Wyandotte—some where—sturdy men were looking to the future.

They that stayed have won. Through it all, up here at Manhattan, were a few earnest souls preaching the gospel of better farming, better livestock, scientific methods—things that most farmers sneered at—then. It was no sincere in 1875 to be at the head of the agricultural college. It took faith.

And so, if you don't mind, take yet another look at Kansas and at THE INDUSTRIALIST. The state has grown far beyond its borders since 1875 and the little, three-column eight-by-ten, the careful chronicler of all these stirring times, has also put on new garments befitting its enlarged dignity. Thrice in the thirty-five years the paper has altered its dress, or suit, or whatever it is a paper wears. It grew, first, to four columns in the late '80s and afterward became a book of eighteen or twenty pages. In the beginning it was published, under great difficulties, as practice for the students of printing. It was a newsy, interesting, readable paper. As the college grew, and its discoveries and developments became of more than state interest, THE INDUSTRIALIST

gave its space to scientific papers by the faculty.

With the establishing of a department of industrial journalism in Kedzie Hall, a larger part became necessary. Co-operating with the school of printing in the same building, THE INDUSTRIALIST provides a scope for the activities of its students in two departments. In one, with Deaman, it is hoped, to tell the world of the wonders of agriculture in simple language from the hills; attractive and entertaining fiction and in the other they will be telling the economic side of the question. With few exceptions, the contents of the paper will be the work of the students. It is a labor in which they are certain to take pride. No effort will be made at present to print current news except when that news affects the college. It will be a paper of the college, its friends and alumni now started the world over.

After which, probably, it will not be amiss to reprint here a few words in conclusion from the editorial of 1875:

"The INDUSTRIALIST proposes to say and do the things that may properly be said or done by persons engaged in the daily work of an institution created by legislation and guided by the state."

INCREASING THE WHEAT FIELD.

It is estimated that Kansas produces annually a million bushels more wheat than formerly, through the efforts of the agricultural college in improving the seed. The average yield of the state should, by this means, be raised two bushels an acre in the future. This would mean eleven million bushels increase in the total production or a return of approximately ten million dollars.

The college is developing strains of high-yielding and high-quality wheats. Wherever seed of these wheats has been sent in the state larger yields have been obtained and the entire crop has been benefited by the neighboring farmers for the coffee times an increase of from one to ten bushels an acre, due to this seed, has been reported.

The college sent a number of experts this year into the growing wheat fields throughout the state, to determine the purity and quality of the wheat for seed, directing the farmer in the selection of this purpose, assisting him in selling it as a seed crop and operating with the elevator and mill in giving the seed the best possible distribution throughout the wheat belt.

Prof. Call gave a lecture to the inmates at the Penitentiary Building last night on corn growing. It had been predicted that none of the seed would have been raised in the state had finished. Students should find it interesting.

It is also predicted, without any real basis to be factious, that Prof. Call's auditors will practice in the fields for some time to come. Prof. Holton should now tell the farmers the system of which infected blood has been injected. This builds up a strong resistance to the cholera bacteria in the blood of the immune hog. When its blood, and at the same time the blood of an infected hog, is injected into a susceptible hog, this hog is furnished a means of resisting the disease. The result is a mild form of cholera that leaves the hog immune.

PORK COMES FROM THE ORIENT.

But the College declares it has stopped. That it is designed.

Pork from the Orient is coming in place of Pacific coast pork in America. The scarcity of domestic supply and the attendant high prices have made possible such importation. Frozen porkers from China are in vogue in American pork markets, but are said to possess only possibilities for the importer and present conditions. Cheap production accounts for the possible competition with the American producer. It offers the suggestion that the world is now such a big place that it is hard to find the future farmer must stand on his competitors and be governed by world market conditions to a greater degree than ever before.

The "Pork Production" school of the Kansas State Agricultural College, held at Manhattan, October 15, was the first of its kind in the state. The school was held at the Rock Island Hotel, under the direction of Rev. A. E. Holt, pastor of the Congregational Church. This college church, Dr. Holt believes, should have a building adequate for public work.

ALLOW NO CATS OR DOGS.

VAGRANT VISITORS WOULD BETTER AVOID THE HOG SERUM PLANT.

The College "Vets" Are Mighty Particular in Preventing the Spreading of Cholera—How the Serum is Made—The Cost to Farmers.

The vagrant cat or inquisitive rabbit or dog that enters the hog-cholera serum plant at the Kansas State Agricultural College is doomed. It never comes out alive. Every precaution is used to keep out stragglers and to prevent the spreading of the disease, but occasionally a stranger gets in, and the visit means death. The plant is surrounded by a six-foot woven-wire fence to minimize such sad occurrences. All men who enter the enclosure are required to change clothing and disinfect their hands before leaving the plant.

This plant—the largest of its kind in the world—is northwest of the college buildings, at least eighty rods from any hog pen. The disease is carried by animals, especially in the dust on their feet. Drainage is also an important factor in spreading the hog-cholera. The precautions taken at this vaccine plant are no greater than those that should be taken by every farmer having hogs infected with cholera.

HOW THE VACCINE IS MADE.

The vaccine is made under government regulations. Dr. E. F. Kubin is in charge of the plant. He has two helpers. Two methods of vaccinating hogs are used to prevent cholera. The first is called the serum method. Blood is taken from a hog suffering from the cholera and is heated to weaken the action of the bacteria causing the disease. This attenuated blood is injected into a susceptible hog. Because of the weakened action of the bacteria the development of the disease is so slow that the blood of the vaccinated hog overcomes its effects and the hog becomes immune.

This method is not practicable unless used before the hog has been exposed to the cholera. If used after exposure the disease will develop sooner than the weak form of cholera due to the serum injection, and the result is a severer form of cholera than without vaccination. The serum method of vaccination should never be undertaken without the aid of a competent veterinarian.

TO PREVENT, NOT A CURE.

The second method, generally known as the simultaneous method, is much simpler. The virus may be injected at any stage of the disease, but is, of course, used as a preventive rather than a cure—there is no cure for cholera.

The virus used in this method of vaccination is made by mixing the blood serum from a hog infected with cholera with the serum of a hyperimmune hog. A hyperimmune hog is one that is immune to the cholera and into the system of which infected blood has been injected. This builds up a strong resistance to the cholera bacteria in the blood of the immune hog. When its blood, and at the same time the blood of an infected hog, is injected into a susceptible hog, this hog is furnished a means of resisting the disease. The result is a mild form of cholera that leaves the hog immune.

The vaccine is sent from the college as it is needed. Large quantities are not made at one time, as it deteriorates with age.

The expense for vaccination is about thirty cents for a fifty-pound hog. The expense increases in direct proportion to the weight of the hog, a hundred-pound hog requiring about sixty cents worth of vaccine.

All the hogs dying of cholera at the plant are burned.

A College Church Suggested.

A college church for all students, regardless of their denominational tendencies, is suggested for Manhattan. The Kansas State Agricultural College, held at Manhattan, October 15, was the first of its kind in the state. The school was held at the Rock Island Hotel, under the direction of Rev. A. E. Holt, pastor of the Congregational Church. This college church, Dr. Holt believes, should have a building adequate for public work.

ship, religious education and social purposes.

It should be endowed so that an assistant pastor might work among the students and superintend the work of religious education. It should have funds to develop the musical work of the church in a way not permitted by the money available for the local churches, and it should have funds to extend the church work among the students and to help them in many ways not now possible. At the University of Wisconsin, five assistant pastors give their time to work in connection with the work of local churches among the students. At the University of Illinois, the Presbyterians have a guild of 760 members. The Congregationalists in Champaign have started a fund of \$50,000 to equip and endow the Congregational plant in that city. At the University of Missouri, a guild has an endowment of \$276,000. Similar work is carried on at the University of Arkansas, Nebraska, Colorado, and Kansas. At Lawrence, the Presbyterians throughout the state have given \$50,000 to equip Westminster Hall for the use of Presbyterian students.

While the ultimate support will be from funds invested, it is within the bounds of propriety and should be possible for the churches to aid in such work. Members of churches in college towns consider it a privilege to help students. It is a task that should be shared by the churches of the state. Dr. Holt's proposition should have serious consideration. Anything that tends to uplift the moral tone of the student body deserves approval and support of the college and the city of Manhattan and the state.

A Golden Text.

Having the promise of the life that now is and of that which is to come.—I Tim. IV 8.

FROM AFRICA FOR ADVICE.

Incidentally Wayne Thornton Told of Ostriches and How to Judge Them.

Of course he came to see the agricultural college. When a man comes from Cape Town to Manhattan, as Wayne Thornton has done, he has a particular mission. Mr. Thornton had one. He came, accompanied by Mrs. Thornton, to get pointers to use in managing the agricultural college recently established at Capetown by the colonial government. In this country the agricultural colleges have passed through their most trying periods. Their officers have had experiences that now are valuable. Mr. Thornton and the Cape Colony government are to have the benefit of the eventful years that marked the organizing of such institutions as the Kansas State Agricultural College.

Stock judging classes in South Africa have to know as much about ostriches, Mr. Thornton says, as the students in this country must know about cattle, horses or mules, to have a chance at the awards in fair times. Indeed ostrich farming, as it is called over there, is more important than the breeding of cattle or hogs. Students must know all about the size and quality of the plumes, for upon these points rests the standing of the birds. Mr. Thornton says the ostrich industry is profitable. One government ostrich farm cleared \$15,000 last year.

Mr. and Mrs. Thornton commented favorably on the practical work given in the home economics and domestic art courses at the Kansas State Agricultural College. They were much interested, too, in the soil physics laboratory, one of the most completely equipped in the country.

Blackleg in Cattle Controlled.

Over one hundred thousand doses of blackleg vaccine have been produced at the Kansas State Agricultural College and distributed to the farmers of Kansas in the past eighteen months. Formerly, from ten to thirty per cent of the annual crop of calves of Kansas fell a victim to this disease. Farmers now vaccinate so generally that the loss is estimated to be less than one per cent, saving the state hundreds of thousands of dollars a year.

Just So It's Heard.

"The proper way for a man to pray," said Deacon Lemuel Keyes, "And the only proper attitude is down upon his knees."
"No, I should say the way to pray," said the Rev. Dr. Wise, "Is standing straight with outstretched arms and rapt and upturned eyes."
"Oh, no, no, no," said Elder Slow, "Such posture is too proud; A man should pray with eyes fast closed And head contritely bowed."
"It seems to me his hands should be austere clasped in front, With both thumbs pointed to the ground," said the Rev. Dr. Blunt.
"Last year I fell in Hodgkin's well Head first," said Cyrus Brown, "With both my heels a-stickin' up, My head a-pintin' down;
"An' I made a prayer right then an' there— Best prayer I ever said, The prayinest prayer I ever prayed, A-standin' on my head."
—Sam Walter Foss.

SUNFLOWERS.

Symboleer! Angus Champion once more. Some record, this.

Things always come out right for the man that comes out right himself.

A journalist writes the story of to-day to make the history of to-morrow.

Not many American farm boys are afraid of work. What they resent is getting the work but no share in the proceeds.

When you find a boy dissatisfied with farm life you'll find a father at home, nine times in ten, whose chief ambition is to buy up the entire township.

The farmer that gets on his hind legs and howls "confiscation" every time rock roads are mentioned usually lives in town. Tenants don't need good roads.

"What I don't understand," said President Waters, one day, "is why some men borrow money at 10 or 12 per cent but refuse to pay one-half that much interest for good roads.

Nearly every one yearns, at some time in life, to write a book. But how many authors have as many readers in a year as a newspaper reporter has in a week—if he's on the right paper.

The college rule requiring the bell to ring as soon as the speaker of the morning has discovered the subject of his discourse would be mighty popular in some churches that shall be nameless.

The minister that makes his church and his religion attractive will get the boys and girls. The world has discarded the old-time, gloomy Sunday. You don't have to have a long face to be a Christian.

There's a whole lot of fine, homely philosophy in "Sunny Jim" McKeever's idea that boys should always have something to do. Properly managed this plan will save father many a heartache about the chores.

The search for the drouth-resisting variety of corn is all well enough; but what the country needs is corn that can resist the terrible pests and winds and worms found annually by the bulls and bears on 'change.

More than 2300 students were enrolled at the Kansas State Agricultural College last year, the largest enrolment of any agricultural college in the world. The average cost per student last year was \$103, a less sum than at any other institution of its size in the country. Four departments were added to the college during the year: The department of industrial milling; the department of forestry; the department of highway engineering; the department of industrial journalism.

It wasn't so much the "call of the city" that affected the rural population as it was the call of a lot of eager young people deprived of social and home pleasures through poor management. A really live minister in a township, a minister that isn't afraid of plowed ground, can do a lot to keep down the number of deserters. But of course the minister can't be "really live" if he hasn't enough to eat, and the only way to feed a minister is to pay him for his work. Some eastern resort hotels hire a chatty, agreeable, sociable, dressy man of experience to suggest entertainment for the guests, stir up golf matches and organize hunting or walking parties. A wealthy farming community ought to do that much for its own boys and girls and its mothers.

LOCAL NOTES.

Custodian Lewis reports 30 boys working on the janitor force.

Julius T. Lucht, city librarian at Leavenworth, Kansas, visited the college Monday.

E. G. Meinzer, assistant in German, has been very ill with the jaundice at his home, 600 Osage Street.

The mechanical department has been repairing the radiators and steam pipes in the different buildings.

Harry Dodge, a student last year in the agronomy department, has enrolled this year for animal husbandry.

An office to be occupied by R. K. Nabours, instructor in geology, is being equipped on the third floor of the museum.

Miss Gertrude Barnes, librarian, attended the meeting of the State Librarians' Association in Abilene last week.

A room is being arranged on the upper floor of the museum to be used as an office by R. K. Nabours, assistant in geology.

J. B. Parker, assistant entomologist, is now in Southern Kansas investigating chinch-bug conditions and arranging for effective winter treatment.

The first college bell rings from 7:45 to 7:50. The second bell is supposed to ring from 7:55 to 8, but is not always exact as it is regulated by the class bells.

The chemistry department received a shipment of six barrels of gasoline, to be used in making gas. The department uses about three barrels of gasoline a month.

C. J. Ewald, international secretary of the Y. M. C. A., spoke to the Y. W. C. A. and Y. M. C. A. in joint meeting at the United Presbyterian Church, last week.

Custodian Lewis has a swarm of bees that has produced 109 pounds of surplus honey since last June. In addition to this there is about 40 pounds of honey in the hive.

The demonstration spraying work on apples in Southeastern Kansas is now almost completed. The representatives of the college are expected to return to Manhattan within a few days.

A crossing has been put in on the walk between the shops and the veterinary building. The walk west of the Auditorium has been repaired. This is the second time this walk has been repaired.

L. M. Peairs, of the entomology department, reports excellent results from last winter's spraying against San José scale. He is now making arrangements for the treating of plantings that need it.

W. S. Gearhart, highway engineer of the college extension department, has returned from a trip to Topeka, where he was called to consult with the city engineer and one of the city commissioners regarding the Filmore street bridge.

The college needs more fire apparatus. It has one chemical engine and three hundred feet of hose, a part of which is in very poor condition. The hydrants are so far from some of the buildings that they could not be used to the best advantage in case of a fire.

"Rural Life Problems" was the subject of an address to the State Presbyterian Synod, meeting, October 13, at Salina, by Edwin L. Holton, professor of rural education, of the college extension department. Prof. Holton visited the Minneapolis high school Friday.

Royal Purple, Vol. III, has been the subject for discussion by the senior class. The committee that will get out the book has been elected. It has been decided to make the book the best that the wisdom and coin of the senior class will permit. A large assessment has been levied.

Three Eggs in a Day.

A hen that laid three eggs in a day has been discovered at the poultry-house. Hens have been known to lay two eggs in a day but a hen that can lay a fourth of a dozen is mighty un-

common. This particularly ambitious biddy is a White Plymouth Rock.

Trap nests are used in all hen-houses, so arranged that when a hen steps into a nest the door falls shut. Every hen has an aluminum band around one leg with a number on it. When the poultryman makes his rounds he has only to open the trap door, take out the hen, note its number and give it credit for a day's work. In this way a yearly egg record is kept for every hen, and the poultryman can pick and breed an egg-laying strain.

Consternation was created at the poultry plant when it was discovered one day recently that hen No. 274 had laid three eggs that day—one soft-shelled and two as good as any hen can lay.

But the sun of this remarkable hen is likely soon to set. A cancer about the size of a small apple is growing under its beak. The students in veterinary science will try to remove the cancer in a few days.

IT MEANS BETTER HOMES.

Instructors in Domestic Science in Kansas are to Organize.

Instructors of home economics in Kansas are to organize. Mrs. Mary Van Zile, professor of home economics and dean of women at the Kansas State Agricultural College, attended the meeting of the State Teachers' Association at Topeka this week to help start the organization.

The importance of education in domestic science is being everywhere emphasized. Also there has come a realization of the need of an interchange of ideas among the teaching force. The proposed organization should prove of benefit to the teachers and help materially in improved methods of instruction.

HOW TO GUARD AGAINST SMUT.

Simple Directions in a College Bulletin Are Here Briefly Described.

Wheat is infected by two kinds of smut, known as "loose smut" and "stinking smut," or "bunt." "Bunt" may be controlled by treating the seed wheat in this way: Mix one pound (= 1 pint) of commercial 40 per cent formaldehyde with 50 gallons of water. This solution should not be made up until needed for use, as it loses strength by standing. Spread the seed wheat on a clean barn or granary floor and sprinkle with the formaldehyde solution, shoveling the grain over and over until every grain is thoroughly moistened. An ordinary garden watering can may be used, but a three- or four-gallon hand sprayer, used for spraying fruit trees, is better. When thoroughly moistened, the grain should be shoveled into a heap and covered with a canvas or tarpaulin for two or three hours. The floor on which the work is done should first be sterilized by washing down with the solution of formaldehyde.

The complete process is described in a bulletin issued recently by the Kansas State Agricultural College.

Sunshine in the East.

W. A. McKeever, professor of philosophy, left last week for Illinois. He was to speak in several cities before returning.

ALUMNI NOTES.

Earl Trosper, '10, is teaching in the high school at Estherville, Iowa, and is coach of the football and basketball teams.

One of the interesting sights shown the members of the Kansas Librarians' Association at Abilene, last Friday, was the dairy farm established by James A. Garver, '07, according to scientific methods learned at the Kansas State Agricultural College.

J. E. Payne, '87, has been giving special attention this year to the study of dry land farming in Eastern Colorado, a part of his work as field agent of the Colorado experiment station. Mr. Payne begun this work in 1896. He says Eastern Colorado has developed much in that time.

ROBS THE STATE'S SOIL.

THAT'S WHAT HAPPENS WHEN ALFALFA OR CORN ARE EXPORTED.

But, if Something Must be Shipped Let it be Alfalfa Rather Than Corn, Which Takes Much and Gives Back Nothing.

What do you know about alfalfa? What do you know about the plant-food it takes from the soil?

What do you know about any of the legumes? And do you know what is a legume? The farmers in Kansas are supposed to be modern in their methods, but there are many things about the crops they grow of which they still are ignorant. Few persons except farmers, perhaps, know that a legume is any pod-bearing plant, such as clover, alfalfa, peas, beans, the coffee-tree, etc.

PRESIDENT WATERS' WARNING.

Henry J. Waters, president of the Kansas State Agricultural College, warns farmers against continually robbing the soil. In every possible way he urges them to feed their forage and ship the cattle, and in support of his proposition has directed the compiling of valuable information.

Almost any up-to-date farmer knows that nitrogen is one of the principal fertilizers. It is worth, in its cheapest form, from 15 to 20 cents a pound. In one ton of alfalfa hay there is \$8.91 worth of plant-food, divided in this way: Nitrogen, \$6.72; phosphoric acid, 51 cents; potash, \$1.68.

TEMPTATION TO SELL.

The temptation to sell alfalfa is almost irresistible because of the high prices received for it. But some day the farmers will learn that more money is to be made by feeding it to their live stock than by shipping it out of the state. Kansas is a great producer of alfalfa. Not long ago the manager of the Lincoln Park zoölogical garden of Chicago contracted in Wichita for a year's supply of alfalfa, showing that Illinois is far behind in this respect.

However, if the farmers must sell something and must ship something out of the state, it is to be preferred that they sell and ship alfalfa rather than corn. Corn robs the soil of its richness. In 1,000 pounds of corn there are 16.2 pounds of nitrogen. At 15 cents a pound, a ton of corn would contain \$4.86 worth of nitrogen.

TEN EYCK THE BUSY PERSON.

Plenty to do at Hays, but He Doesn't Get Up Until Five.

A. M. Ten Eyck, superintendent of the Hays Branch Experiment Station and professor of farm management at the Kansas State Agricultural College, is at the college for a few days. Mr. Ten Eyck is obliged to spend most of his time at the experiment station, but he will be here next winter to give lectures in farm management to the classes in agriculture.

Since going to his new position Mr. Ten Eyck has been unusually busy. For the most of the summer he has been doing the work of the farm foreman in addition to his own duties. This required him to begin work at 5 o'clock in the morning. He is, nevertheless, pleased with his new position. He had no vacation last summer. He is now compiling a press bulletin on the subject of grasses.

Five hundred acres of wheat have been sown on the Hays farm this fall and it is doing excellently. There are 3,600 acres in the Hays experiment station farm.

KANSAS FIRST IN WHEAT.

Seventy-two Million Bushels a Year for the Last Decade, the Record.

In feeding the world, Kansas leads in its production of wheat. Seventy-two millions of bushels have been furnished every year for the last decade. Minnesota is next to Kansas with 68 million bushels; North Dakota third with 57 million, Nebraska fourth with 40 million, South Dakota fifth with 39 million, and Missouri shares honors with Washington for eighth place with a production of 28 million bushels. In the world production Russia is next to the United States with 513 million bush-

els; France comes third with 329 million bushels and British India has fourth place with 302 millions.

Illinois is first in the raising of corn with an annual production of 306 million bushels; Iowa is next with 284 millions, Nebraska third with 213 millions, Missouri fourth with 191 millions and Kansas fifth with 169 million bushels. In the world production Austria-Hungary is next to the United States with 165 million bushels. Argentina is third with 146½ million bushels, and Italy fifth with 92 million bushels.

HEAVY KERNELS SPROUT FIRST.

An Interesting Wheat Head Test Described in Circular No. 11.

Which will sprout first, a small or a large kernel of wheat—a heavy one or a light one? The point is necessary to decide, and mighty important, too, because it's reasonable to suppose a farmer would prefer the kind that comes up first. But farmers and agronomists—one is not scientific and the other is—have long disagreed upon the question.

Now comes Circular No. 11 by J. G. Lill, in the department of agronomy, with these conclusions:

The heavier, better developed kernels in a head of wheat germinate better than the lighter kernels in the same head.

Grading according to size will not select the kernels which will germinate the best.

The germination is directly related to the density of the kernels.

The germination is independent of the size of the kernels.

The above points have been indicated by the results of the tests. It is believed that the samples used were large enough to give accurate determinations of the germinating ability of the different samples of wheat.

KNOW HOW TO USE CONCRETE?

It's Cheaper in the Long Run Than Lumber—the Possibilities.

Concrete for the farm is attracting much attention now-a-days. Every well-equipped place should use it. Whenever it has taken the place of lumber it has proved to be an economy. Water-tanks, barn floors, chicken-houses and corn-cribs are now made of concrete. The cost of construction is a little more at first than if lumber were used, but once in it is practically permanent, whereas lumber will wear and decay.

One of the best features of concrete is that it may be used by any one with a little care and attention, whereas a properly built house or barn can be put up only by a carpenter. It has been proved by tests in the engineering department of the Kansas State Agricultural College that concrete can successfully be made from sifted ashes and cinders instead of with sand and broken stone. A story describing the correct proportions will shortly be published.

MAKING DRAWING TABLES HERE.

The Machine Shops are Turning Out Some Specimens of Fine Work.

Within the next two months the machine shops of the Kansas State Agricultural College at Manhattan will finish 50 drawing tables for the new mechanical engineering drawing rooms. The pieces were cast last spring, but as most of the finishing is done by students, it will take longer than usual to complete them. The tables will represent the work of four departments before they reach the machine shops: The designing room, the drafting room, the woodwork department, and the foundry, where the pieces were cast. There are more than 50 pieces to every table, and every part, including screws and taps, were cast and will be finished in the agricultural college shops. The tables will be superior to anything in the market. The drawing boards can be raised or lowered, or tilted to any angle to suit the person using them. They are solid in any position, a requisite for good drawing. Also, they are a demonstration of the practical work done in the engineering department of the college.

PLANT YOUR BULBS NOW.

PUT THEM IN THE GROUND NOW, BEFORE THE FIRST HARD FREEZE.

Some Advice From a Student at the K. S. A. C. on How to Arrange and Care for Flower Beds During the Winter.

From the Kansas City Star:

Are your bulbs planted? October is the month, before the first hard freeze. The soil should be rich and mellow. See that your bed has a good drainage and that the bulbs can be protected during the winter. Fall planting is much better than spring planting.

Care should be taken in planting bulbs. A well-drained bed on the south side of a house, and well protected, is an ideal one. Plant tulips four inches apart and seven inches deep. Hyacinths grow better when placed seven inches apart and four inches deep. Narcissi also should be four inches deep. Plant crocus and all smaller bulbs, such as scillas and snowdrops, three inches deep.

TULIPS SURROUNDED BY CROCUS.

A good way is to plant a bed with tulips in the center and crocus for a border. The crocus will blossom first, but still will be in bloom when the tulips flower. Hyacinths and narcissi should be planted in separate beds. Scillas blend nicely in any bed.

When the bulbs are in, and as soon as the first freeze comes, cover the bed with fertilizer, leaves or branches. This will prevent the freeze and thaw of the bulbs with every change of temperature. When spring comes the protection can be removed gradually.

WATCH THE SNOW THAWS.

Bulbs require little attention other than this. But especial care should be taken so that in the thaw following a snow the water will drain off, and the outside protection be at least six inches thick and evenly distributed. Then in the spring you may look for good results. C. G. WELLINGTON.

FOR BACTERIOLOGY 204.

The Largest Class in the Country, Probably, Enrolled This Term.

More than 200 students have enrolled, this term, in the department of bacteriology for a general course. This is said to be the largest enrollment for that study in the history of the college. Francis H. Slack, formerly of Boston, who took charge of the bacteriology work September 23, believes 204—the exact number now recorded in his department—to be the largest class of the kind in the country. All of which, one of the students says, "bodes ill" for bacteria.

Besides the large class in general bacteriology, an unusually large number has enrolled in the class on soil bacteriology. Nine students have been assigned to special work, several in preparing theses and the others in research work of much importance.

To Teach Boys Plating.

Nickel and silver plating is soon to be taught to students in the electrical and mechanical engineering courses. This will be in connection with the foundry work now required. The work will consist chiefly in plating articles made by students in the foundry, such as paper-weights and other fancy brass pieces. Bronze plating also will be done.

It is not the intention to teach the finest points of the plating trade, but to teach the students the general principles of it. The plating room is partly equipped and other machinery is soon to be installed. E. B. McCormick, dean of engineering, says he expects to have things ready to teach plating in the winter term.

A. E. Ridenour, foreman of the foundry, will have charge of the plating work.

Why, Oh Why?

One of the mysteries of the time is why some boys will prefer the hardships and risks of life as motormen or hack drivers to four years' education provided by the state and, usually, a farm afterward.

THEY MAKE NO ALCOHOL.

NO FARMER COULD COMPLY WITH THE RED TAPE REQUIREMENTS.

The Denatured Product, Promised as an Economical Boon for Power or Light, is as Much a Dream as Ever—A Fairy Tale.

Not long ago farmers became interested in the possibilities of denatured alcohol, a substance that can be made from cheap and unutilized products of the farm and that can be used as a substitute for kerosene and gasoline.

But the farmers of Kansas are not making denatured alcohol. There is too much red tape about the national law regulating its manufacture to suit the average busy farmer. The law provides that his distilling plant must be of small capacity; he must furnish a bond; he must show what disposition has been made of all alcohol-producing material received; he must furnish to the revenue collector a written description of the plant and premises; and he must furnish reports and records and comply with many other requirements.

No Kansas farmer can afford to be troubled with these things now. He is too busy getting rich.

NO COMPETITOR, HE.

Under the laws just referred to the farmer can not become a very great factor in the total alcohol production of the country. He can not compete with the plants of the large distilleries, as low cost of operation requires large investment, and under the law his plant must be limited to 100 gallons of "proof-spirit" a day. Proof-spirit is half alcohol and half water. Only at occasional intervals would there be a sufficient accumulation of material on one farm to justify starting the plant. After a short run it would have to be closed for lack of material. Occasional operation is more expensive than continual operation, so the cost of production would be higher on the farm.

With the staple farm crops selling at the present high prices no farmer would be financially justified in using them to make alcohol. Small defective potatoes, moldy corn and other grains, damaged fruits, beet pulp and similar material only could be used with any prospect of profit.

NO SAVING IN POWER.

Corn-stalks would form an enormous source from which alcohol might be derived, but the process of working up the stalks is at present too expensive for farmers' consideration. The bureau of plant industry of the department of agriculture is making some investigations with the idea of reducing the cost. It hopes eventually to discover new processes and apparatus that farmers can use economically.

Fred R. Crane, of the Illinois Agricultural College, has tested alcohol in gasoline engines and the results obtained do not warrant the use of alcohol for power. He found that it required a pint and one-third of alcohol to equal one pint of gasoline. With alcohol costing thirty cents a gallon, gasoline could cost forty cents and still be used with profit. This difference in the cost explains why the farmers of Kansas do not use alcohol for power.

WINNING TRACK TEAM IN SIGHT.

The Aggies Have Great Prospects for 1911—Fifty Men Report.

Track athletics, like everything else at the Kansas State Agricultural College, is booming this year. R. V. Christian, captain of next spring's squad of record breakers, called a meeting of track men and others interested last week, hoping to bring out a few who could start the ball rolling in preparation for the spring work. His surprise was as great as it was agreeable when fifty men showed up at the meeting.

Many of the new men already hold high school records; some of them will undoubtedly make the older members of the squad hustle to keep on the squad.

J. B. Whelan will coach the men another year. That is one of the

things that made the meeting a joyful one. John B. has coached the squad for two years, and has turned out men that have made good. He not only knows how men should train for the different events, but seems to have the knack of getting out of his protégés the best there is in them. The combination works like a charm.

Professor Hamilton offered a medal to the winner of a series of cross-country runs, to be pulled off this fall. Fowler and Detwiler, experienced members of the devotees of the cinder path last year, were put in charge of the men that will compete in these events, and some good exhibitions are promised. The first run came off this week.

A number of new men with promising records are in school this year. Smith, a Kansas City (Kansas) lad, has done good work with the shot. Stone, who hails from Winfield high school, has some reputation as a quarter-miler, and hopes to increase that reputation at the expense of the state record. There are several distance men and hurdlers in the new consignment shipped into the aggie school this year that should make good. There are vague rumors of another ten-second man in college this fall. When this was mentioned to Coach Whelan he hoped to meet the wonder, but looked rather skeptical. Ten-second men are few and far between.

Of the old men, Christian, Fowler, Holmes, Bentley, Detwiler and Woods were present at the meeting and spoke enthusiastically of the season's prospects.

Clifford Carr, star hurdler two years ago, added his mite of good cheer by promising to don the B. V. D.s in the spring.

P. E. McNall, who ran the two-mile in 10:21 at Lawrence two years ago—the fastest official two miles ever run in Kansas—is expected back in college the winter term and will make a valuable addition to the squad.

Coach Whelan is reported to have said that if some broken records were not made by this bunch he would retire from active life and teach organic chemistry the remainder of his days.

GOOD THINGS TO EAT

Seasonable Suggestions From the College Domestic Science Department.

Seasonable menus for the ordinary family are always welcome. Here is one of a series that will appear in THE KANSAS INDUSTRIALIST. The materials are within the reach of every one. Appetizing and attractively served meals do much toward increasing the joy of living.

BREAKFAST		
	Grapes	
Cream of Wheat with Figs		Cream
Poached Eggs on Toast		
Coffee		
DINNER		
Baked Hamburg Loaf		
Browned Sweet Potatoes		
Hot Stew		Butter
Parkerhouse Rolls		Cheese
Apple Pie	Coffee	
SUPPER		
Scalloped Potatoes with Cheese		
Apple and Celery Salad		
Bread	Caramel Custard	Butter
	Wafers	Tea

Professor Eyer to Waverly.

Within the next few days, B. F. Eyer, professor of electrical engineering, will go to Waverly, Kansas, to inspect the municipal electric light plant. Professor Eyer is the consulting engineer and, with a representative of the company that put in the plant, will see that everything works satisfactorily. Elmer W. Jones, '09, is superintendent of the plant.

Where's Dr. Headlee?

Hessian flies have been found in considerable numbers in fall and early sown wheat in Ellis County, near Hays.

No greater mistake could be made, by men of intelligence, than to cry "abandoned farms" when they mean "abandoned brains."—Bailey's: The State and the Farmer.

The Santa Fe DAIRY SPECIAL

From Newton to Syracuse

(Over the branch lines, too)

October 31 to November 5

Lecturers from the State Agricultural College

Kansas needs more cows, more butter,
more cream, more cheese on the farms

There's Money in Dairying

The lecturers will tell the farmers how to get it

REMEMBER THE DAIRY WEEK

Five Days' Lectures at Nearly Seventy Towns

PEACHES VS. CITY WORK.

G. W. ARMSTRONG TRIED FARMING AFTER 32 YEARS OF DRUDGERY.

More Money and Infinitely More Satisfaction, the Verdict of an Amateur With Eighty Acres in Oregon County, Missouri.

From the Kansas City Star:

Why anyone should stay in the city and work for someone else when he can go to the country and raise peaches is beyond the comprehension of G. W. Armstrong, thirty-two years employed by the Lovejoy Planing Mill Company of this city.

Mr. Armstrong doesn't cite any theories regarding the "back to the land" movement. He has facts, in the form of a statement of his account from the Koshkonong-Bransfield Fruit Shippers Association, which show that, after all expenses and commissions had been deducted, he had a balance of \$1,451.74 from the sale of his peaches this year. In addition he sold \$250 worth of peaches the association did not handle.

CHICKENS, TOO.

Also, Mrs. Armstrong raised two hundred chickens, and the other day sold eighteen "springs," for twelve cents a pound, and has fifty turkeys, which will bring her a fair price next month. They have eight cows, clearing an average of \$12 a month apiece, to say nothing of fresh vegetables, their own meat, pure air, plenty of fish and game, pure water, and other features found only in the country.

"I never saw a farm until two years ago," Mr. Armstrong said. "I worked thirty-two years as a stair builder and mechanical draughtsman for the Lovejoy Planing Mill Company. Twenty-two years of that time I received \$4 a day and the last ten years I was a general foreman at \$1,800 a year.

WORN OUT AT 63.

"At 63 I was so worn out I decided to quit. I was tired mentally with the drudgery of my work. My wife urged

me to go to the country. She had been reared on a farm. I paid \$2,000 for eighty acres, four and one-half miles from Koshkonong, Mo., in Oregon County. Ten acres was in peaches and the remainder was tillable land.

"The peach orchard was run down and I knew nothing of farming—in fact, I just about could tell a peach from a potato. I got hold of everything I could find printed regarding peach culture, and, if I do say it myself, I raised bigger peaches and better peaches than people who had been in the business for years.

"I've got my place in fine shape now, having spent about \$4,000 on improvements, and have been offered \$100 an acre for my farm. I don't want to sell it and I don't want any more land. I shall not even increase my orchard acreage. A man can take better care of, and raise more peaches on ten acres than he could if he attempted to look after twenty.

AND HE'S NOT WORRIED.

"I'm not worried about my job. My health never was better. I can light my pipe and tell the hired man what to do, or I can go hunting or fishing whenever I feel like it. When I get too old to work I can stay right on that farm and end my days in peace and comfort. They turn a horse out to pasture when he gets too old to work, and I consider that I'm 'on pasture,' although I could come back and work if I had to—but I don't have to."

Increasing the Apple Yield.

Spraying demonstrations made last summer in eleven of the leading apple orchards of the state have increased the apple yield more than three-fold, by spraying against insects and fungus diseases. When these apples were harvested, under the direction of the specialist from the Kansas State Agricultural College, the farmers and fruit growers from the surrounding country were present to see the striking and profitable results and receive instructions as to how they were accomplished.

FORTY IN COOKING CLASS

MOVABLE SCHOOL WAS WELL ATTENDED AT WASHINGTON.

For a Week the Lessons Held the Women's Interest so Closely that They Organized a Home Economics Club.—A School at Arkansas City.

It's a great thing to know how to cook and sew, particularly if you live where you have to do the work yourself. Forty women attended the sessions of the Kansas State Agricultural College movable cooking and sewing school at Washington, the week of October 3-8. About one-half the number were married—and, doubtless, the others soon will follow their excellent example.

Miss Minnie Foreman and Miss Marie Fenton, from the extension department of the college, were in charge of the school. So interested did the women become that they organized a home economics club with more than forty girls as members.

It was declared by many during the session that the subjects taught in the movable school belonged of right in the high schools of the state, and that they should be taught there. Wherever they are taught the movable school is not allowed to go. But the college has held to the idea that it was necessary to get the public awake to the fact that cooking and sewing must be taught somewhere, and if not in the regularly organized schools, then in the movable schools described.

Another movable cooking and sewing school began October 17, at Arkansas City, Kansas. More than fifty women and girls are attending.

Every Boost Helps.

The Saline County Club has organized. There are about thirty-five members. The purpose of the club is to boost the college at home and promote social activities among the members at school.

The Kansas Industrialist

Volume 37

Kansas State Agricultural College, Manhattan, October 29, 1910

Number 5

SHE WAS A KEDZIE GIRL.

AN ALUMNUS WHO LEARNED TO COOK IN ANDERSON HALL.

Fine Times They Had in the Days When the Domestic Science Department, now Famous the Country Over, Was Getting a Start.

What good times the girls used to have cooking down in the basement of the main building—Anderson Hall it is now—with Mrs. Kedzie! The old corner room, used as a kitchen then, is a sorry looking place now, with its warped floor and falling plaster. But as I stood there, somehow I seemed to hear Mrs. Kedzie's soft voice saying, "Now, girls—"

It doesn't seem so long ago that we were making cakes and pies down there. Up in the class room Mrs. Kedzie lectured and then we trooped down stairs, took our aprons from the hall closet and tied the strings for one another in big bows. In those days the girls made their aprons pretty, with dainty tucks and edging and ruffles on the shoulders. We worked in groups of four at small tables, each girl with her chum. How we chattered and laughed and ran about, and how patiently Mrs. Kedzie taught us, delightfully praising our successes and cheerfully accepting our failures.

THE THINGS THEY COOKED!

Remember the Alladin oven? Made of tin and asbestos, and heated by a round burner lamp. We don't see them any more, but we girls thought they were great. And the puddings that came out of that oven were deliciously brown, and so were the cookies and doughnuts and other good things. Remember the little pantry where we kept the crocks and the tinware, and how we always had trouble in finding the cake tins?

We made good things to eat down in that old basement. Along about noon the hall above would be savory with the odors of baking bread and spice cake and coffee. And the boys would slip around to the windows and the girls would pass out hot biscuits



She Was a Kedzie Girl.

and cookies and tarts. Thursdays we made extra dainties and took turns waiting on the faculty members while they ate them. For always, Thursdays, the faculty met—met all the long, long afternoon until the shadows fell and the birds were twittering sleepily in the trees.

There were candy days, too, when we made good old-fashioned taffy and chocolate drops—none of the chafing-dish fudge for us—and sold it in five-cent bags. And every boy did his duty on candy day.

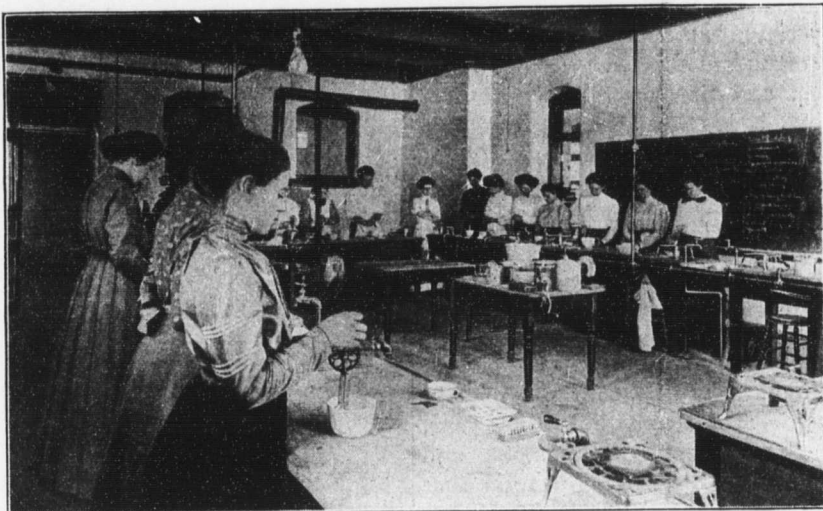
And when the regents came to town! What a hurry and bustle there was; what wonderful things we baked! And how the regents enjoyed themselves! We girls served, and so great was our excitement that surely Providence

must have protected the regents from over-turned soup and coffee.

FOR THE HUNGRY STUDENTS.

What luncheons of sandwiches and coffee, gingerbread and cheese, pumpkin pie and doughnuts we served the hungry students when Friday came. In those days every student had to be in his seat in chapel—unless he could get an opportunity to be polite and give his seat up to a visitor—from half past one until three o'clock, while the juniors and seniors discussed from the platform the Rise and Fall of the Roman Empire or pleaded for "An Hour of Rest."

Mrs. Kedzie taught us how to make butter, too. In a little room down there about eight feet square we put the milk in tin pans and churned the cream in a barrel churn. And we washed and salted and printed it, and



In the Cooking School To-day.

it was good butter. Now the boys are taught to make butter. They have a fine building devoted to this work, with all the modern facilities for turning out a good product.

And if you visit the domestic science department you will see another fine building with class rooms and laboratories and kitchens, fully equipped with up-to-date means for individual work. It is a fine thing to see—big, airy rooms with beautiful maple wood tables arranged in a hollow square; the bright-faced girls in dainty caps and aprons, the aprons all from the same pattern and perfectly plain. Every girl has a complete outfit of tiny stew kettles and omelet pans and everything she could possibly need to cook with; and to all this is added a little gas stove for every girl.

AND NOW SEE THE CHANGE.

The boys make good butter and the girls make good pies, but it seems to me I can taste the country butter and the gingerbread that Mrs. Kedzie taught us to make. The instruction she gave was the foundation upon which has been built the success of some of the foremost teachers of domestic economy of to-day. Our own domestic science department has one of Mrs. Kedzie's girls at its head.

It was a long time ago. The years have brought many changes. And while we rejoice in the new order of things, in many homes are good cooks and cheerful housekeepers who like to remember that they were "Mrs. Kedzie's girls." JOSEPHINE FINLEY.

A. S. Hitchcock a Visitor.

A. S. Hitchcock, of Washington, D. C., formerly professor of botany at the Kansas State Agricultural College, visited old friends in Manhattan last week. Mr. Hitchcock was a member of the college faculty for eleven years. He left here to become government agrostologist, or—as Prof. Willard puts it—the official grass man. Mr. Hitchcock is now going to Washington from Mexico. In his talk to the students in assembly, last Wednesday, he gave much interesting information about the country and its people.

NOW THE DAIRY TRAIN.

THE COLLEGE—SANTA FE SPECIAL LEAVES NEWTON MONDAY.

Lecturers Led by J. H. Miller Will Tell Kansas Farmers, in the Next Six Days, About an Important Industry.

Every one is interested in milk and cream and butter and, possibly, in cheese. Every one, especially outside the cities, hopes some day to have a cow or a herd of cows. People that neglect the possibilities of dairying miss fine chances for money making.

The advantages of the dairying industry and what it means to Kansas farmers will be set forth next week, by a corps of lecturers from the college. These lecturers will travel on the "Dairy Special" provided by the Atch-

Society to participate in the preliminaries for the debates.

Officers elected in Monday's meeting were: Clif. Stratton, president; Mabel Broberg, secretary; Terence Vincent, treasurer.

The members of the college debating teams are selected from the several literary societies in a series of preliminary contests, held in the winter term. The affirmative team last year was composed of P. C. Vilander, L. C. Christie, and Lynne Sanborn. They won the decision over Fairmount. The negative team, D. G. Roth, W. S. Davison, and Florence Wyland, lost at Wichita by one vote. The question was:

Resolved, That the United States government should establish a permanent tariff commission.

HARD TIMES FOR CORN.

Six Kinds of Enemies Attack It—Here Are Plans in Its Defense.

Dry rot in corn can be killed in two ways: By burning infected ears and stalks and by carefully rotating your crops. The scientific details of the subject are treated at length in a bulletin issued by the Kansas State Agricultural College.

Six kinds of rot or mold affect corn. The most destructive is the dry rot. It is estimated that the loss in Illinois, due to this fungus, is from two to five million dollars annually. The loss in Kansas is not known, but many localities are infested with it.

Dry rot does not stop with the tip of the ear, as most other rots do, but extends downward at least one-half and in most cases over the entire ear. It attacks sound, mature corn as well as the stunted corn. It is believed by some investigators that to a certain extent sterility in corn is caused by the dry rot fungus.

This fungus can be recognized easily. The ears are completely covered with white, thread-like mold. The ears are usually light and do not break down like the sound corn but remain erect. If a cob is broken it will be seen that on the outer edge is a row of black specks that are the size of a pin-head. These are the spores that serve the function of seed. These spores are also found upon the dry stalks.

It will take about three years to kill the infection.

TIMELY GARDEN TIPS.

Things to Do About the Lot in Readiness for Winter.

Put some parsley plants in a box and put it in a light cellar or shed.

Put some frozen rhubarb roots, as soon as possible, in a barrel of earth in the cellar; and have pie-plant for winter use.

Bury a barrel of cabbage in a well-drained spot and cover with leaves; or pile the cabbage on the barn floor and cover with straw to keep from freezing.

A New Home For Insects.

The entomology department has moved its insect incubators from the old greenhouse into the east section of the new house. A reinforced concrete bench six feet wide has been erected in the center of the greenhouse to receive these machines. Wooden benches will be filled with soil and used for growing wheat and other plants upon which live the insects under observation. Dr. Headlee believes that when this insectory is properly equipped it will be one of the best in the country.

W. E. Blackburn Was Here.

W. E. Blackburn, of Anthony, president of the board of regents, was in Manhattan Saturday on official business and to visit his daughter, Miss Kate Blackburn, a junior in the college.

KINZER PAID HIS WAY.

THE DEPARTMENT OF ANIMAL HUSBANDRY REPORTS A PROFIT.

An Unusual Financial Situation in a Branch that Brings the College Much Fame—Appropriation Not Used.

To have a department pay its own expenses is an experience seldom recorded in state institutions. When a department is not only self-sustaining, but also reports a profit large enough to pay the salaries of its teachers, the circumstance is worthy of a whole lot of attention. This is the situation in the department of animal husbandry in the Kansas State Agricultural College, at Manhattan. People are talking about it to-day. And it is a mighty interesting situation, especially in view of the fact that R. J. Kinzer, the man chiefly responsible for this very agreeable state of affairs, is considering the offer of the American Hereford Breeders' Association of \$4,000 a year to be its secretary. It is doubtful that any other department of animal husbandry in the United States has duplicated this record, notwithstanding comparisons are dangerous and ordinarily to be avoided.

IT SELDOM HAPPENS.

"The average department of animal husbandry of anything like the size of ours," said H. J. Waters, president of the college, "costs for maintenance alone, outside the salaries of its teachers, from \$10,000 to \$15,000 a year. So far as I know, this is the only department of animal husbandry in the country that is even self-sustaining, much less returning profit enough to pay the salaries of the teaching staff."

Prof. Kinzer's department conducted more than the usual number of feeding experiments during the year, and exhibited stock at every important fair in the state or country, and at the end of the year was enabled to return to the executive department its entire appropriation of \$3500 and still have \$300 to its credit.

THE PRIZES HELPED OUT.

The principal source of profit in the department is the sale of thoroughbred stock. In the rearing, buying and selling of thoroughbred cattle, horses, hogs and sheep, Prof. Kinzer's department is probably as successful as any private stock breeding farm in the country. But it made money also in exhibiting this stock at the fairs. The prizes won by the college exhibits left a profit after all expenses had been paid. The third source of profit was in the feeding experiments.

As to "Campus Chat."

If the editors of *The Mercury* knew how eagerly the students read every line of that paper's "Campus Chat," and how frequently THE KANSAS INDUSTRIALIST refers to it, they, the editors, would give that department their especial attention. *The Mercury* is a newsy little paper throughout. Its editors are wise in giving college news liberal space. And, by the way, they should not forget that their college reporter is a member of the journalistic class.

Organizing for Domestic Science.

The preliminaries necessary to organizing the Home Economics Instructors of Kansas were taken last week at Topeka in the meeting of the Kansas State Teachers' Association. A committee was appointed to prepare the working plans of the new organization, especially with reference to the unification of the courses of study in domestic science in the high schools. This feature of the work received much favorable attention in the convention.

THE KANSAS INDUSTRIALIST

Issued weekly during the college year by the Kansas State Agricultural College, Manhattan, Kansas.

PRES. H. J. WATERS Editor-in-chief
PROF. C. J. DILLON Managing Editor
DR. J. D. WALTERS Local Editor

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The typesetting and other mechanical work is by students in the school of printing, of which J. D. Rickman is superintendent. Both these departments are in Kedzie Hall.

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SATURDAY, OCTOBER 29, 1910.

THE WOE OF LIVING.

One of the surest and quickest ways of reducing the price of an article is to lessen the demand for that article. Circulate a report that a thing is scarce, and a whole lot of people fall over one another to buy it. There is nothing new in this. It is just human perversity. The children are never so thirsty as when the water is turned off and mother has forgotten to fill the tubs.

Now that bacon has gone up to 45 cents, sliced, the demand for it doubtless will increase. Some families will cut out cream and substitute condensed milk, but they just must have their bacon sliced. Why anyone, under the present beneficent form of republican government, should pay 45 cents to have some pink-headed grocer's clerk slice their bacon passes the comprehension of the ordinary, "side meat" humans engaged in the laudable enterprise of disseminating college news. But the majority will do just that same thing, and then howl about high prices.

So far as most of the articles of food are concerned, the people themselves are to blame for high prices. In March, 1909, the butchers in Kansas City were charging 35 cents for sliced bacon. The way to control that quotation was to quit buying sliced bacon, or to slice it at home. That bacon cost the butchers 18 cents. It was delivered at their stores by the packers for that price. The butchers, who were also the grocers in most cases, made from 12 to 15 cents a pound profit. They carried in stock only the best variety because their customers would buy no other. But at that moment bacon as palatable, if a trifle less lean, was selling down town at 14 to 15 cents a pound. The consumers were at fault. They were encouraging the grocers' greed.

What was true of bacon applied also to beef. The grocer humored the consumers' whims. He might have piled his ice-box high with an excellent quality of less aristocratic beef, but Mrs. Consumer asked for, and would take, only porter-house steak and rib roasts. No plates, chuck or rump roasts were desired. The grocer had to charge extra for the choice cuts to make up for the loss on pieces that would not sell.

Mrs. Consumer can buy a tiptop grade of coffee for 17 to 25 cents, in bulk, but she has to have it in fancy cans, nowadays, adorned with labels and attractive names; and for these—the cans hold the same coffee as that offered in bulk—for these things Mrs. Consumer pays 40 cents a pound.

She could make bread at home, or have it made, for about 3½ cents a loaf, but she pays the grocer 5 to 7 cents for a loaf that has been reduced in the last year—"scaled," the baker calls it—to a size that enables the wholesale baker to get approximately \$10.50 or \$11.00 a barrel for flour bought at contract prices for an average of \$5.60. The grocer gets \$13.15 for the 263 loaves that come from a barrel of flour—a profit of \$2.63. Of course, it is easier to buy ready-made bread than it is to make it at home; but how mother would bark if father had his shoes made to order!

Mrs. Consumer could buy fairly appetizing butter for 25 cents a pound in the city, but she insists upon the alleged creamery stock, in a pretty car-

ton, at 30 or 35 cents. It is not the dealer's fault. It is the consumer's whim.

As to the hog question, the packer has a shade of reason in his favor. Bacon hogs really are scarce. Packers have pleaded for that stock, but farmers, if they produce any hogs at all, turn their attention to the heavy, fat animal. Why? Because hogs are up to eight or nine cents and may go to ten, at which price they were quoted last fall.

And what are you going to do about it? If a farmer prefers to sell corn at 60 cents rather than feed it to hogs and so get 65 cents for it in a round-about way, who shall prevent him?

"Why," the average present-day farmer demands, "should I go to the worry and work of feeding my corn to hogs when I can sell it for 60 cents and save myself the work?"

Short-sighted policy, this. Complete forgetfulness and almost tragic carelessness for the future; total disregard of the drain upon the land, a drain that must leave it barren if continued.

Corn robs the soil. Corn sent away from the farm reduces the value of that farm as the shipment of high-grade ore reduces the value of a mine. As President Waters aptly put it a few days ago, "Plant-food is the farmer's gold."

AS TO "CAPTAIN JACK."

In considering the case of Captain Jack Crawford, "Poet Scout," who entertained patrons of the college lecture course for two hours a few nights ago without any bad results, too much attention should not be given to his egotism. It would be impossible to give a lecture such as he gives, consisting wholly of his own experiences and his own alleged poetry, without a rather tiresome use of the personal pronoun "I." Captain Crawford is almost the last of his type. If his exhortations are at times wearisome they should be borne patiently for the sake of old times and for the inestimably valuable and unselfish service the lecturer gave his country long ago.

The audience doubtless remembered that if Captain Crawford had appeared in conventional evening dress, with his hair properly clipped and his feet encased in shoes of the prescribed pattern, it would have been impossible to imagine him as the "Poet Scout." It needed the long fringed Prince Albert, the flowing locks, the gold-mounted Winchester, the wide hat to complete the setting for the scenes he portrayed.

Captain Crawford is no fakir. He lived the experiences he described. He risked his life for his country. He did things for others the telling of which has kept many a boy, now grown to manhood, awake for hours. And through it all he has kept his house in order. Egotism is to be expected in a man that has made his way to fame despite ignorance. Crawford had no schooling. What he is to-day is due to his own determination. He has inspired many a wavering youngster to lead a better life. The worst thing he ever did, perhaps, was to write verses. By his own account he has broken into rhyme upon every conceivable occasion and upon the slightest pretext. But, at that, some of his poetry is vastly better than could be produced by a lot of his critics, which may not, after all, be justification. He didn't give much of a show the other night, but it was a novelty. And it may never be seen here again.

HELP FOR PLAYGROUNDS.

A gift of \$1,000 from John Booth gives Manhattan an excellent start for playgrounds. In the words of the country editor, now is the time to subscribe while the enterprise has the encouragement of this pioneer's liberality.

Manhattan is particularly fortunate in having an ideal park for playgrounds. With the money available it can be equipped after the fashion of Holmes Square, in Kansas City, for instance, and have money enough in the treasury to assure the first summer's wages for an instructor or superintendent, an absolutely necessary

official. The college football and baseball teams could doubtless be induced to contribute a day's activities to establishing a fund to maintain the playground, and the live citizens of the town would see to it that the remainder of the amount needed was increased substantially.

Nothing in the lives of boys and girls is so important as play. This does not mean "poor" children alone, but also the children of families above the line of pinching. Few children know how to play; the average bird-dog knows more about it. Nothing is more pathetic than a primed and starched boy or girl idling along the street with no place for real, human play. It is the loneliest picture imaginable. Manhattan should see to it that the children have every possible and proper facility to exercise and develop the spirit of play, which means quick understanding of fairness to others. No boy in a ball game is likely to have an unhealthy mind. Athletics induce cleanliness personally and morally.

UP FROM OBLIVION.

The blow has fallen. Prunes have gone up. For years this humble and faithful friend of the boarding-house keeper was within the reach of all. The price fluctuated little. The emaciated, scrappy and dried-up prune familiar to most unmarried people without homes, and the large and succulent variety, a joy because it was seldom seen, both went along through life filling, each, its appointed place. Pigs' feet or laundry soap might go up in price; but almost any one could feel certain of prunes. They were a safe and sane standby that could be relied upon at 10 to 12 cents the pound. The best could be had for 15 cents a pound. In ten years, indeed, they declined 24 per cent. They were quoted last year, by the Department of Commerce and Labor, as the one article of food that had not increased in price.

But now, may it please the court, prunes have gone over to the enemy. No particular reason for this change exists that any one has discovered, except that the growers need the money. Some enterprising factor, encouraged, doubtless, by the success of others in canning coffee and sweet potatoes, conceived the idea of putting prunes, also, in cans and charging fancy prices. And the plot succeeded. You can get a fairly husky variety of prunes in Manhattan for 25 cents a pound, about a cent a prune. They cost the grocer 17 cents a pound. There are prunes in town for 12 cents, but they are not much. Eight cents a pound profit on the derided prune is fairly large interest on an investment. Most men are satisfied with five to eight per cent. The grocer demands eighteen and gets it. Happy grocer.

ADVENTURES IN CONTENTMENT.

It might not be a bad idea if the state's collection of school books—text-books—was enriched by the addition of David Grayson's "Adventures in Contentment." These stories have been running in the American magazine. They are altogether the finest things in literature pertaining to country life. Not only should they be read by every boy and girl in Kansas—particularly on the farms and in the lonely places—but they should receive the careful attention of grown-ups for the wealth of sweet and homely philosophy they contain. To read them cannot fail to brighten lives that may seem dreary.

The every-day chores have a new meaning when Grayson tells about them. "We shall cut the clover today," he shouts gleefully, as if cutting the clover were the especial ambition toward which he had long been struggling. No drudgery in farm work for him. The horses and the cows are his friends and the hired man, in his ridiculously flashy socks, his social equal. They toil together through a hot, hot day, for the most part silently, and separate at night with gracious words, worn and weary, and undishonored, to sleep the sleep that knows no waking until dawn. It makes one think how much one misses in life, the reading of these stories; it makes one de-

termine to watch closer, hereafter, to see if it be true that the clover looks this way or that, or the squirrel does so and so, or the moon strikes the eaves of the house differently in Grayson's home than in ours. "I have heard talk of the hard work of the harvest," he says, "but I never yet knew a healthy man who did not remember many moments of exquisite pleasure connected with the hardest and hottest work."

Grayson has the delightful faculty of seizing every glint of sunshine that comes his way. His back ached when the clover cutting was on, just as yours ached, and his forehead was as damp and his eyes as heavy as ever yours were, but when he went to the porch after supper that night for a smoke and, presently, Harriet's white dress in the moonlight signalled her approach for the nightly chat, Grayson's heart was at peace.

And, although almost exhausted, his back so stiff that he scarce could stand straight when bed time came, so much remained to be grateful for that as he trudged up the stairs to bed he looked back at the silver light outside and whispered, "Thank God."

Healthy, happy, hard worked, weary and thankful! Wouldn't a little instruction along that line of philosophy be a fine thing, even in "Sunny Kansas?"

A Golden Text.

And he shall be like a tree planted by the rivers of water, that bringeth forth his fruit in season; his leaf also shall not wither; and whatsoever he doeth shall prosper.—Psalm 1-3.

WELLINGTON A FINE TOWN.

Paved Streets, Sidewalks and Clean Windows Create a Good Impression.

Wellington is a fine example of what hustling, up-to-date people can do in Kansas. The good impression begins at the railroad station, where you step upon excellent pavement and well-laid sidewalks. It is increased when you meet Billy Stotler, of the *News*, pad and pencil ready to record the message the agricultural college has sent out. It is a clean town with clean windows and it is peopled by a bright-eyed, ambitious, courteous citizenship. The city hall, with its immaculate lawn, is alone worth going that far to see.

CLARK AN INSURGENT, TOO.

But His Objection is to Present-Day Teaching of Oratory.

An insurgent spoke to the students in assembly last Friday. He was S. H. Clark, associate professor of public speaking in Chicago University, who gave two readings in the college lecture course.

Prof. Clark called himself an insurgent because he was against the present-day schools of oratory. He was against oratory as it was taught in most institutions of learning. He regretted that they did not, as a rule, teach real public speaking; that real public speaking did not consist in requiring students to memorize and give with great gesticulation the old orations of Demosthenes, but that it was teaching students to think of something to say that was interesting and should be said and then taught them to get down to brass tacks and say it.

Oratorical contests and debates, even, are nonsensical, Prof. Clark believed, because there was nothing new in them—no original thought. Neither the aspiring orator nor his audience was benefited by a "Beyond the Alps Lies Italy" type of oration, he declared.

Do You Know These Things?

Albert Dickens, professor of horticulture, spoke Tuesday in student assembly. His subject was "The Campus." He urged every student to learn the names of the flowers in the different beds on the campus; of the several species of trees. They should know these flowers and trees not by scientific names, said Prof. Dickens, but by the common names by which they are known.

Hallowe'en.

JOEL BENTON.

Night of eerie wonders seen
Is the eve of Hallowe'en.
Then things befall too dear to doubt,
For all the Fairy World is out;
And, in the dusk or moonlight clear,
Miracles once more appear.

Kobold, elfin, pixy, sprite,
Flock to celebrate this night.
Pranks they play with nuts and yarn:
And, from the garden, field, and barn,
Masked they come, keen tricks to try,
With fortune-telling riotry.

Now youths and maidens by the fire
Watch the flames rise and expire:
Chestnuts put upon the coals
To see what augury controls
Their love—or, where the apples float
In a tub, the omens note.

We, too, who may not wander more
On Youth's iridescent shore,
Still beside the fire-place sit
Amidst Love's coquetry and wit,
And dream of our lost, joyous teens,
Over uncounted Hallowe'ens.

SUNFLOWERS.

Hallowe'en, Monday. Look out.

It takes a pretty smart man or boy to conceal ignorance.

"What's the Matter With Kansas?" It needs more hogs, William.

Too many families on chuck steak incomes have rib-roast or porter-house appetites.

The fresh-air crank is busy, these mornings, bragging that he never wears his overcoat until Christmas.

"Another thing about this motor-car craze," said a preacher last Sunday, "many a man that runs a new model every year is behind in his pew rent. And yet he has no idea where he will go when he gets his last puncture."

They age early in Colorado. A dispatch from Canon City reports that "Mrs. Joseph Machin, 33 years old, was accidentally shot and killed by her six-year-old son," and the *Goldfield News* heads it: "Youth Kills Aged Mother."

A new problem now confronts the rural uplifters: Shall they urge bath tubs for the families first or for the hogs? Clean hogs in sanitary surroundings mean money for the farmers. An easy way out of the trouble is to get tubs for both.

Of course it may not happen for many, many years, but some night an engineer will pass a train of Pullman sleepers without either blowing his whistle or having the fireman ring the bell. When this comes true a great American novel or a drama may be written.

A Miami County, Missouri, paper, under the head of "Things to Know," says: "Flies may be kept from alighting on hard, painted walls and picture-frames by rubbing them with laurel-oil.—*Kansas City Star*."

Why rub them with laurel-oil? Why not swat them?

Strange contrasts one sees sometimes in Kansas. Two men on the "Pork Chops Special" were arguing a few nights ago in the sleeper. About hogs? Not much. One was insisting that the Semaramis was the best hotel in Cairo, Egypt. The other believed Sheppard's was the place to stay. And the next station was Herington.

Did you ever notice the effect of annual or occasional "home comings" in rural communities? Bill Smith blows in from Kansas City and tells all about his wonderful success in business. Nine times in ten he's fibbing. In a month or two desertions begin on the farms thereabouts and mother talks about "the call of the city." The average "home coming" is a blow to any community. They should be forbidden.

At Clyde, Kansas, a few days ago, a woman in a black sunbonnet was seen driving a Standard Oil wagon—that is to say, she was driving the horses. She is a widow. When her husband died she took his place as agent and delivered the oil on his route. She has a thriving business. Also, she has a big lummo of a son without gumption enough to do the work his father did. The Standard is in favor of a square deal for its old employees, this woman says, and proves it by saying the company never has had a strike. But if it is so wonderfully strong, why doesn't this company send a man to Clyde to rout out that son and give him a job that will keep him shut up for thirteen months a year?

LOCAL NOTES.

Miss Florence Warner, assistant in the library, made a brief visit in Topeka last Tuesday.

E. P. Claxton, of the University of Tennessee, gave a talk on education at the assembly last Saturday.

E. G. Meinzer, assistant in German, has recovered from his recent illness and is again in charge of his classes.

R. R. Smith, of New York, was visiting the college in the interest of the MacMillan Book Company, Monday.

The instructors of the home economics and domestic art departments enjoyed a pleasant outing, Monday, at Fort Riley.

E. P. Johnston, assistant in public speaking, left Sunday, October 23, for Wellington, Ohio, to attend the funeral of his mother.

The infant son of Mr. and Mrs. C. V. Holsinger, 620 Moro Street, died Saturday night, October 22. Burial was in Sunset cemetery.

B. L. Remick, professor of mathematics, was called by telegram, last Saturday, to Waverly, Iowa, because of the death of his brother.

The horticultural department had plenty of help to pick persimmons last Sunday. Eighteen unidentified persons were there at one time.

George Bailey, of Anthony, superintendent of the Anthony schools, was a campus visitor Saturday. He was the guest of Miss Kate Blackburn.

T. J. Headlee, professor of entomology, and W. B. Wood, an assistant in the entomology department, will carry forward Prof. Peairs' work during his absence.

Terence Vincent, an active worker in student enterprises and in the college Socialist Club, left, Thursday, for home. He probably will return for the winter term.

Ed. H. Webster, director of the college experiment station, and O. E. Reed, of the dairy department of the college, left yesterday for Chicago to attend the national dairy show.

Donald Davies, of Green, Kansas, came down Saturday to see the Rolla-Aggie football game and spend Sunday with his brother-in-law, W. H. Lane, assistant in electrical engineering.

Miss Mary Lovejoy arrived Wednesday from Illinois for a brief visit with college friends. She was a short-course student here last year. Miss Lovejoy is going to her home in Almena, Kansas.

A special run was made in the college foundry last Friday to get out repairs for the heat and power department. One ton of tuyers irons was cast to be used in equipping the Jones mechanical stoker.

Have you ever seen a growing lemon? If not, visit the greenhouse and you will see two small lemon trees, one bearing two and the other three lemons. The largest is about twelve inches in circumference.

Dr. J. D. Walters talked of the early history of the Morrill Act at students' assembly last Tuesday. He will continue his lectures on the early history of the college from time to time throughout this and next term.

Where are the old society bulletins? They were taken down last summer when the walls were being repaired before painting. New boards are being made because the old ones were of so many different sizes and shapes.

George A. Dean, assistant entomologist, was called to Topeka last week by the illness of his mother. He died three hours after his arrival. Mrs. Dean had never recovered from the shock caused by her husband's death a few years ago.

The current number of *The Saturday Evening Post* carries on its first page a picture showing several motor-cars containing Kansas State Agricultural College girls and women of Manhattan. The picture accompanies a story by Isaac F. Margossion, describing the uses to which motor-cars are put by the farmers of Kansas.

L. M. Peairs, assistant in the entomology department, was taken down with typhoid last week while in Kansas City. He is now in St. Margaret's hospital in Kansas City.

Albert Dickens, professor of horticulture and C. F. Chase, assistant in the department of agronomy, returned Monday from an institute trip to the northeastern part of the state.

B. F. Eyer, professor of electrical engineering, and J. E. McDowell, a senior in the electrical engineering course, spent Tuesday and Wednesday in Waverly, Kansas, making an acceptance test of the electric light plant of that place.

Many persons suppose the weather flags on the main building forecast the weather for the day they are displayed. This is not true. They forecast the weather conditions from 8 p. m. the day they are displayed to 8 p. m. the following day.

P. M. Kokanour, former student and foreman of the printing-office in the early '90's, visited college last Tuesday after an absence of 10 or 12 years. He is at present an agent for an eastern paper firm. His headquarters is in Goodwin, Oklahoma.

In a recent meeting of the Choral Union the treasurer's report gave \$829.25 as the total amount taken in last year at the concert. The expenditures were \$585.31, leaving a balance of \$243.94. The concert the previous year showed a deficit of \$6.

The horticultural department will experiment in storing vegetables this winter. A cave has been built in the side of Bluemont for this work. There will be no special apparatus for heating the cave. Nothing will be used except what a farmer could have on his farm.

B. F. Butler, of Lerdo, Mexico, spent a few days in Manhattan last week visiting his son. Mr. Butler is manager of a cotton plantation of 44,000 acres. He is carrying on several experiments on his plantation. He was interested in the K. S. A. C. experiment station.

BACK FROM THE SOUTH SEAS.

Howard M. Chandler, '03, Returns from Honolulu on Business.

Howard M. Chandler, '03, was at the college last Monday. Mr. Chandler left Honolulu September 21 on the steamship "Sierra." He has been engaged a part of the time for four years in supervising the mechanical construction work of large cane-sugar factories in the Hawaiian Islands. Since his graduation here he has also done this kind of work in Porto Rico and in Mexico on the Isthmus of Tehuantepec. Mr. Chandler may become connected with the engineering department here. The matter is under consideration.

EXTENDING THE CAR LINE.

In Three Weeks the Trolley Will Run to the Athletic Field.

To handle the traffic that will be created as soon as the new athletic field is completed, the Manhattan City Railway is building an extension to its main track. The extension will be a half mile long and run west from the terminal at the south college gate to the site of the athletic field. W. R. West, president of the company, says the new track will be laid in three weeks, if the weather continues favorable. Cars will run over the extension as soon as it is built.

A Chance for Carrie Nation.

While on his trip into Illinois W. A. McKeever, professor of philosophy, found a town with about the population of Manhattan that had twenty-two saloons. Prof. McKeever learned that this town was selling over \$200,000 worth of intoxicants annually over the bars.

Why?

Carl Butler, a student in the general science course, is making a series of records through the spirograph of members of the fourth-hour psychology class. By means of the spirograph one may determine the number of respirations per second.

ALUMNI NOTES.

Harlan Deaver, '10, visited the college last week.

Miss Alice Skinner, '09, is visiting college friends.

Miss Virginia Meade, '09, of Topeka, visited in Manhattan last week.

Clyde McKee, '10, judged the agricultural products at the Osage City fair last week.

Joe Montgomery, '07, is engaged in state animal husbandry work at St. Paul, Minnesota.

H. E. Hershy, '10, is employed in Chicago by the Chicago Automatic Telephone Company.

Guy Noel, '09, is teaching agriculture and coaching athletics in the Chapman high school.

Roy Johnson, '10, saw the football game last Saturday. Mr. Johnson is farming near Mankato.

Mrs. George Knostman, '09, went to Topeka Monday last for a week's visit with relatives and friends.

Louis Aicher, '10, is at Caldwell, Idaho, where he is director of one of the state experiment stations.

L. O. Tiffin, '10, is employed in the telephone department of the Western Electric Company at Chicago.

Walter Zahnley and Geneva Henderson, both of the class of '09, are teaching in the Eldorado high school.

Tom Hall, '10, was a campus visitor Monday. He will enter college after Christmas to take up work along agricultural lines.

Miss Ida Rigney, '09, is visiting her parents, Mr. and Mrs. I. N. Rigney. She is teaching domestic science in the Wichita schools.

W. J. King, '09, has recently been appointed to the position of superintendent of the trades at the Hutchinson reformatory.

A. G. Kittell, '09, correspondent for the *Mail and Breeze*, reported the work of the K. S. A. C.-Rock Island Pork Special last week.

Mrs. Dalinda (Mason) Cotey, '81, is now living at Berkeley, California, where her daughter is a student at the University of California.

Tom Parks, '10, is teaching engineering and coaching athletics at the Arkansas State Agricultural College at Jonesboro, Arkansas.

Dr. B. Buchli, '84, has been nominated for the third time as commissioner of the first district of Wabasha County. He has no opposition.

H. E. Kiger, '09, assistant in animal husbandry in the University of Indiana last year, is at his home in Burlington. He is employed by a firm that builds silos.

Emmet V. Hoffman, '98, and Mrs. Hoffman visited friends in Manhattan last week. Mr. Hoffman was quarterback on the college football team in the nineties. He was an interested spectator of the game last Saturday.

Mrs. W. A. McCullough, class of '98, Delavan, is with her parents, Judge and Mrs. Wilder, leaving Wednesday for the state meeting of D. A. R. at Lawrence, where she will be the guest of her cousin, Miss Florence G. Clarke.

W. J. Wilkinson, '05, has been elected secretary-treasurer of the Oakland Architectural Club, of Oakland, California. The association has a hundred members. Mr. Wilkinson was the first graduate of the architectural course in this college.

Three Kansas State Agricultural College graduates are teaching at Eureka, Kansas. Leslie Hazen, '06, is teaching agriculture and Rena Faubion, '10, is teaching domestic science in the Southern Kansas Academy at that place. Cora Trimmer, '10, is teaching domestic science in the high school.

The Webster Society had a very interesting alumni program last Saturday. These participated: Sam Kimble, '73, C. M. Breese, '87, Albert Dickens, '93, E. H. Webster, '96, I. A. Robertson, '96, C. A. Scott, '01, F. M. Hays, '08, F. B. Milliken, '09, M. R. Alleman, '09, J. M. McCray, '10, W. M. Orr, '10, and A. S. Wiltse, '10.

THE WEEKLY MENU.

Appetizing Suggestions for Three Meals From Those That Know.

Here are some reasonable suggestions for the woman who likes to have her table just a little bit different occasionally. This space in THE KANSAS INDUSTRIALIST is intended for the benefit of the women readers of the paper. The editor would be glad to receive comments, criticisms or suggestions as to the matter published here from time to time.

BREAKFAST.

Baked Apples	Omelet	Cream
Wheat Muffins	Coffee	
DINNER.		
Cream of Tomato Soup	CROUTONS	
Roast Beef	Brown Gravy	
Bread	Butter	
Chocolate Bread Pudding	Egg Sauce	

SUPPER.

Cold Sliced Beef	
French Fried Potatoes	Lettuce Salad
Hot Biscuits	Prune Whip

Schedule for Dairy Train.

OCTOBER 31.

	ARR.	LV.
Newton	8:00 am	7:35 am
Sedgwick	8:50	8:40
Valley Center	9:10	9:30
Derby	10:10	10:38
Mulvane	10:51	11:30
Belle Plaine	11:43	12:18 pm
Wellington	12:48 pm	1:28
Argonia	2:18	2:58
Danville	3:18	3:18
Harper	3:36	3:36
Anthony	4:00	4:40
Harper	5:05	
Duquoin	5:40	
Nashville	6:40	
Isabel	7:00	
Sawyer	7:18	
Coats	7:38	

NOVEMBER 1.

Nashville	8:00 am	6:45 am
Norwich	9:15	8:40
Viola	9:53	9:50
Clearwater	10:13	10:53
Goddard	1:00 pm	1:35 pm
Garden Plain	1:50	1:50
Cheney	2:08	2:48
Murdock	3:13	3:13
Kingman	3:43	4:40
Pretty Prairie	5:10	5:10
Castleton	5:30	5:30
Hutchinson	6:05	

NOVEMBER 2.

Partridge	8:00 am	8:40 am
Plevna	9:00	9:40
Sylvia	9:53	10:42
Stafford	11:00	11:40
St. John	11:59	12:35 pm
Macksville	12:55 pm	1:35
Belpre	2:00	2:40
Lewis	2:55	3:32
Kinsley	3:50	4:30
Offley	4:42	4:42
Spearville	5:00	5:40
Dodge City	6:10	

NOVEMBER 3.

Howell	8:00 am	8:30 am
Cimarron	8:50	9:45
Ingalls	9:57	10:40
Pierceville	11:10	11:45
Garden City	12:10 pm	1:45 pm
Deerfield	3:10	3:10
Lakin	3:21	4:22
Hartland	4:32	5:44
Kendall	6:03	6:03
Syracuse	6:28	8:30
Kendall	8:48	
Garden City	9:30	

NOVEMBER 4.

Garden City	7:45 am	7:00 am
McClure	8:45	8:15
Scott City	9:38	9:15
Grigsby	10:13	10:13
Dighton	10:45	11:25
Beeler	11:55	12:30 pm
Ness City	1:10 pm	1:50
Bazine	2:13	2:48
Alexander	3:08	3:43
Rush Center	4:15	4:15
Shafter	4:45	5:30
Heizer	5:50	
Great Bend	6:10	

NOVEMBER 5.

Ellinwood	8:00 am	8:40 am
Chase	9:00	9:00
Lyons	9:20	10:00
Little River	10:25	10:25
Windom	10:35	10:35
Conway	10:50	11:30
McPherson	11:45	12:30 pm
Galva	12:45 pm	1:20
Canton	1:35	1:35
Hillsboro	2:05	2:05
Marion	2:30	3:30

*Drop speaker. †Pick up speaker. ‡Via G. C. & N. Ry.

Dew Delays Early Work.

The glazing on the new greenhouses is about half finished. If the weather conditions are favorable it will be complete in about two weeks. The heavy dews have prevented the men from getting an early start in the morning, as the wood must be dry before any glass is laid. The work appears easy; but the task is not in laying the glass but in handling it without cutting the hands. A good glazier can lay from 700 to 800 panes a day.

A Visitor From Nebraska.

H. M. Childs, president of the Nebraska state board of education, paid the college a short visit Tuesday. He made a tour of the departments under the guidance of James W. Searson, associate professor of English.

HINTS ABOUT FLOWERS.

A MANHATTAN STUDENT TELLS HOW TO GROW WINTER PLANTS.

Water Them Every Day and See That the Roots Get Plenty of Moisture—Rich Soil and the "Placing" Other Things to Watch.

From the Kansas City Star.

MANHATTAN, KANSAS, October 20.—Everyone likes flowers in the winter, but a great many persons will not attempt to keep them. They complain of their poor luck and say plants are too hard to care for.

Keep plants well watered. Many persons will pour a little water on a plant, enough to soak in an inch or two, and wonder that the plants do not grow. The trouble is that the growing part of the plant receives no nourishment. Plants should be watered every day and in such a way that the roots get plenty of moisture. The soil should be rich. Care should be taken in placing flowers near a window. Remember the upper sash is warmer than the lower.

WATCH FOR THE RED SPIDER.

Asparagus ferns and sword ferns are very good winter plants. They must be kept moist and be closely watched for the red spider.

Primroses require much care. They should be changed from one pot to another until in a pot five or six inches in diameter. The atmosphere should be cool, about 55 degrees. They should be kept well watered.

The umbrella plant, the cyclamen, the geranium, the petunia, all will thrive in the winter if attention is given them.

BEGONIAS ARE THE BEST.

Heliotropes need especial attention. The soil should be rich and the room warm and the plant kept where it will get lots of sunshine. The soil should be kept just on the verge of drying out and differs from other soils in this respect.

Palms need a moist heat. They are among the most difficult plants to care for in the winter. Coal gas often proves fatal to them. They always should be kept moist.

Begonias are the best plants for winter. Their foliage is beautiful and the coloring on the leaves is as dainty as that on the flowers when they bloom. Good soil and plenty of water will make them grow.

C. G. WELLINGTON, K. S. A. C.

GREEN CORN FOR HORSES?

An Experiment in the Veterinary Department to Decide a Point.

Is green corn injurious as a feed for horses? The veterinary experiment station is carrying on an experiment to determine the effect of feeding such corn. A quantity of corn is being dried and will be used as feed for several horses, while results are carefully noted.

The same department is also conducting experiments on corn mold. This experiment includes the growth of mold, the analysis, and the effect of feeding moldy corn to live stock.

Now a Browning Society.

The Browning Literary Society, the latest literary society on the hill, has been organized. It is exclusively for girls and the membership is limited to sixty. There is a charter membership of twenty-eight. The object of the society is to do literary work and get practice in parliamentary law, much the same as in the other societies. They will differ from the course taken by the other societies in that only two meetings a month, the first and third, will be open to visitors. The other meetings will be open to members only. The regular meetings will be at 3:30 o'clock Saturday afternoon in the Athenian hall. Miss Harriet Dunn is president and Miss Evalyn Bentley secretary.

Germany Sees the Light.

W. A. McKeever, professor of philosophy, has received an order from Germany for his article on moving pictures, recently published in *Good Housekeeping*.

WHO'S WHO IN COLLEGE SPORT.

An Unprejudiced Account of the Weekly Athletic Activities of the Students.

The Kansas Aggies are making a great football record this year. They have won the six games played to date. The Baptists from William Jewell College, Liberty, Missouri, were the first victims, 57-0. The Indian braves from Haskell Institute came up the Kaw from Lawrence and were more than scalped. They took home the little end of a 39-0 score. The teachers from Emporia had little better luck. They played a good game, and fought to the last. Their defensive work when pushed up against their goal-line was great, but it was not enough to withstand the onslaught of "Mike" Ahearn's scoring machine. They took home to their coeds a sad refrain. The tune was 22-0.

The Aggies then went travelling in search of new worlds to conquer. The "Razorbacks," otherwise the University of Arkansas, under the tutelage of Bezdek, one of Stagg's veterans, managed to hold the farmers to one touch-down. Since their trip over the Frisco system to Fayetteville the boys say the central branch is a much maligned railroad.

On the way home the team stopped at Springfield, Missouri, long enough to administer a sound drubbing to the athletes representing Drury College. The score was 75 to 5. There were those that said the 5 points were allowed on a fluke.

THE ROLLA GAME.

The Aggies hooked up with the Missouri School of Mines, from Rolla, Missouri, last Saturday on the Aggies' home grounds. The Rolla bunch held Missouri University to a 0-0 score and allowed St. Louis University just one lonely field goal. They were touted as a tough proposition and were expected to prove a serious stumbling block in the path of Ahearn's husky harvest hands. It was even predicted that they might win from the hitherto undefeated Aggies.

It took the farmers just two minutes and seventeen seconds to cross the miners' goal-line. Harvey Roots had the coveted honor, a wide tackle swing for 28 yards, planting the ball between the goal-posts.

When the whistle blew for the end of the fourth period the Aggies' aggregate score had reached the 23 mark. While this was going on the visitors had annexed one field goal, credited to Macomber, the Miners' right half. This Macomber is one of the best all-around players that has visited athletic park this year.

A 25-yard forward pass, fumbled, recovered by Zoller, was followed by a series of line plunges by Sims, Whipple, Croyle, and Holmes. On the 28-yard line Roots got the ball and tore off the distance for a touch-down. Croyle kicked goal.

There was no further scoring the first period, though each team got within striking distance of the goal-line. The two attempted drop-kicks went wide.

Neither side was able to score in the early part of the second period. With a few minutes to play, Croyle made a spectacular return of a punt for 43 yards. He dodged or stiff-armed no less than six would-be tacklers. Roots again delivered the goods with a 9-yard dash for a touch-down.

Both teams played ball the third period. Both put up an impregnable defense when close to their goal-line. The Miners worked the ball to within 37 yards of the goal and lost it on third down. Holmes, Sims, Croyle and Roots made consistent gains to the visitors' 29-yard line. The Miners held. Bates dropped back and sent a pretty drop-kick over the cross-bar.

Croyle made a touch-down in the last period, but missed his try for a goal. Bates put his information-soaked toe into the running again and made another three points. His drop-kick was from the 23-yard distance. Macomber put one over from placement, 30 yards, a few minutes later, after a fumble had given the miners the ball well in the Aggie territory.

Besides starring at the carrying game, Macomber played the strongest game on the defense for the visitors. The one place where the visitors outplayed the home boys was on getting down the field under punts. Once four men tackled Bates and downed him in his tracks.

This game leaves little doubt as to the strength of Ahearn's scoring machine. Of course, dope sometimes lies, but according to scores so far this year, the Aggies should be able to win from most any team in the Middle West.

THE SUMMARY.

K. S. A. C.	SCHOOL OF MINES.
Towler.....	R. E. Blake, Detwiler
Roots.....	R. T. Ludwick
Hammond.....	R. G. Hollister
Zoller.....	C. C. Murphy
Cooley.....	L. G. Knickerbocker
Holmes.....	L. T. Conway
Stahl, Elliot.....	L. E. Smith, Detwiler
Bates.....	Q. W. Wagstaff, Forester
Sims, Ratiife.....	
Christian.....	R. H. Macomber
Croyle.....	L. H. Andrus
Whipple.....	F. R. Rable

Referee—Wade. Umpire—Bonnifield.

Field judge—Briggs. Head linesman—March.

Touch-downs—Roots 2, Croyle 1. Goals from touch-downs—Croyle 2. Field goals—Bates 2.

Macomber 1. Time of quarters, 15 minutes. Score, 23 to 3.

Tennis has been growing in favor at the Kansas State Agricultural College. It is a game that is open to the average person. The tennis player does not spend years of hard work mastering the details of the game, only to find when he is through college that there is nothing more doing for him in his line of sport. Speed, endurance and head work count in tennis as much as in football—and the game is good for a life-time. A highly developed, specialized machine is not required. It requires two to start an argument—two only are necessary to make a tennis match. Hence the popularity of the game.

The net racket game had an encouraging start here this season when the college contingent defeated a delegation from the Alma Tennis Club, of Alma, Kansas. Singles and doubles were alike to the farmers. The doubles were won in straight sets, Anderson and Kahl besting A. Stuewe and V. Stuewe, 6 to 0, 7 to 5, 6 to 2. Ray and "Pug" performed brilliantly, but erratically.

H. Robertson, who hails from Westport High, Kansas City, Mo., outclassed his opponent completely, 6-0, 6-0, 6-3. His work is clean cut and beautiful to behold.

The second match on the double court was interesting, but never in doubt. Mielke and Wilson, for Alma, are seasoned players, but had little chance against Downey and McCallum. Downey plays an especially fast net game. McCallum plays steadily and consistently near the base line. Both are heady players. Their score was 6-0, 6-0, 6-4.

Cliff Carr disposed of V. Stuewe with the loss of his third set. Score: 6-3, 6-2, 7-9, 6-2.

E. R. Green, left end on the Tyros, broke his collar-bone in scrimmage practice last Tuesday evening. He was attempting to break up the interference on one of Croyle's end runs. In the mix-up that resulted he fell on his right shoulder under the Varsity backfield.

Green has been doing excellent work on the freshman squad. He is a freshman in the animal husbandry course. His previous football experience was gained on the Mankato high school team.

This is the sixth accident in practice this fall. Dick Lewallen was the first victim. Dick was playing half on the second team; an end run resulted in a broken ankle. He is attending classes again, but will be on crutches another week. "Bunt" Speer tackled one of the Tyros in the open field; he is running signals again this week and hopes to go with the team on the Colorado trip. Elliot was out of the game for nearly two weeks with a dislocated shoulder. "Tiny" Seng, the big guard, has been out of the last two games with a badly twisted knee. The second team had to play at Chap-

man two weeks ago minus the services of Quarterback Sawyer, taking the rest cure for a dislocated shoulder.

FAKES AND FORMATIONS.

Washburn meets the University on the gridiron to-day at Lawrence.

Baker and K. U. will tangle at the soccer game November 12 on McCook field.

The Washburn Review asks the athletic committee to provide megaphones for the rooters. It deplores the fact that when "Manhattan" comes to Topeka the Washburn yelling is always drowned out by the lusty farmers, even with the smaller crowd.

Regent Blackburn broke into the football game last Saturday. He stopped a kick that went to the sidelines with telling effect. He said, after the game, that a football evidently was like some people—you can't always tell from the direction it takes in starting just where it will finish.

Cooper College, Sterling, Kansas, recently held the College of Emporia to a 0 to 0 score. The sporting editor of the Sterling Journal thereupon took his pen in hand and gravely announced that the Cooper team was prepared to meet any eleven in Kansas. Another article said the Cooper boys gathered much information about the new rules in a contest with Fairmount that was lost 31 to 0.

The Kansas Aggies expect to get a line of comparison on their own football ability and that of the conference champions in the game with the Missouri Miners. The Rolla eleven played Missouri, 0 to 0. If the Aggies can beat the Miners they will feel pretty good about their standing in the Valley. They will not find the Miners an easy proposition.—The Kansas City Star.

The Miners must have had an off day Saturday.

Washburn started out this year after the championship of Kansas. The road has been rough, and the going exceedingly heavy. Ottawa put a severe crimp in the aspirations of the Sons of Ichabod when they made away with their game by a score of 9 to 0.

As if this were not enough, the Pedagogues paid a visit to the state capital last Saturday and nosed out a victory by a 14 to 12 score.

It looks like a safe prediction that those aforesaid championship longings of Washburn will be only a sad memory after their Turkey Day contest with the Aggies.

The following figures give some idea of how the Kansas Aggie team is working this year. H. Clay Lint, athletic editor on The Students' Herald, is keeping track of the players and playing this year. His figures are interesting. His count shows up something like this for the Rolla game Saturday, generally admitted to be one of the hardest games on the schedule:

The Farmers were penalized 35 yards; the Miners escaped with 20. The Aggies carried the ball 99 times for a total gain of 710 yards, an average of 7.17 yards gained in every trial. The Miners' advances averaged 5.5 yards; they carried the ball 42 times for a total of 231 yards. Croyle was high man at carrying the pigskin, going 22 times for an aggregate of 219 yards. His runs averaged practically 10 yards. Roots followed with an average of 8½ yards—148 yards in the 17 times he was given the ball.

WON FIRST CROSS COUNTRY.

V. V. Detwiler Was First in the Cross-Country Run Wednesday.

The first cross-country run for the Hamilton trophy was won last Wednesday by V. V. Detwiler. Detwiler made the two miles around the campus in 10:59½. A raw northeast wind took away all chance of equaling the record of 10:17½ established by P. E. McNall in the spring of '09.

"Shorty" Fowler came in about 100 yards behind Detwiler. The closest race was between C. B. Stark, a new

man, and "Miehle" Wood for third place. Stark won by a 3-yard margin. Winfrey and Perrill were fifth and sixth. The remainder of the field walked in, with the exceptions of H. B. Woods, who took a short cut across the campus for parts unknown.

The second run will be next Monday, over the 2½ mile course from the agricultural building to the top of Bluemont and return. The 3-mile run, around the Bluemont course, is scheduled for the latter part of next week.

The interclass tennis tournament has been called off. There were more than forty entries—too large a number to handle before cold weather. The tournament will be arranged as soon as the weather permits in the spring. A trophy probably will be given the best individual player, also, at that time.

HOW'S THIS FOR CEMENT?

Not a Plant in Kansas Ten Years Ago, and Now—

If all the cement produced in Kansas in 1909 were put into wagons, a ton to the load, one behind the other, the procession would reach from New York City to New Orleans and on to San Francisco.

Doubtless there are ways less trite in which to express these statistics, but life is too short to hunt them up. Anyway the mental picture created is convincing, so here's another:

The dollars paid for this cement, piled one on top of another, would make a flagpole six and one-half miles high with which to head the procession. If you don't believe this you can figure it out for yourself.

There wasn't a cement plant in the state ten years ago. The discovery of natural gas at Iola, followed by the finding of heavy deposits of lime rock near the town suitable for cement making, first attracted attention in Kansas to the possibilities of cement manufacturing.

Ranking third in a list of twenty-six cement producing states, led by Pennsylvania and Indiana, Kansas produced last year 5,357,235 barrels of cement, worth \$3,700,257.

Unlike other products used by man, for food or shelter, the price of cement has decreased. This decrease has been as steady and as marked as the growth in annual output. A far-sighted citizen desiring to build something durable, in 1880, paid \$3 a barrel for his cement. In the next ten years the price dropped to \$2.09. In 1900 it was worth \$1.09, and last year it was quoted at 81 cents a barrel at the mills. Competition between the manufacturers, and the decrease in the cost of production, has wrought this change in spite of the enormous demand.

Two natural causes contributed to the marvelous growth of the cement industry: the exhaustion of timber supplies and the consequent increase in the cost of lumber.

The price of all kinds of lumber has increased 50 per cent, while some kinds show an increase of 100 per cent. This, added to the high price of iron and steel, compelled the country to seek a new building material.

On farms the change has been rapid. The good old-fashioned hedge fence posts have given way in many counties to cement posts. The dairy barn, the granary, the chicken-house, the implement sheds and the piggery are now constructed of cement. Many homes of farmers are built of cement blocks. So popular has it become that its use is included in the instructions to students in the Kansas State Agricultural College. The college also sends experts to any farmer applying for help in building a silo of cement, the best silos made nowadays.

H. M. Z.

Agriculture in School.

Seth Babcock, principal of the high school at Effingham, Kansas, was in the city a few days ago. Mr. Babcock is arranging a course in agriculture to be taught in the high school. This course may include intensive gardening next year, but for the present will be restricted to ordinary crop producing.

CORN IS A SOIL ROBBER.

THEREFORE IT OUGHT TO BE FED ON THE FARMS, NOT SHIPPED.

Some Scientific Facts Easily Understood That Show Importance of Saving Plant-Food—What Alfalfa Does for Land.

If you must ship something out of the state let it be meat. Corn is the worst soil robber the farmer grows.

Corn contains 11.4 pounds of phosphoric acid in a ton, about 57 cents worth, and 7.4 pounds of potash, worth 37 cents; a total of \$5.80 worth of plant-food. Now, alfalfa contains a total of \$8.91 worth of plant-food in a ton, but alfalfa already has been pointed out as a leguminous plant that returns something to the soil and produces something; whereas, corn is not a legume and gives nothing back. If the alfalfa were fed to steers in Kansas and the manure saved, the state would receive \$8.91 worth of plant-food, less 20 per cent which the animal is supposed to absorb. It is not hard to see, however, that the saving way and the most economical way is to ship meat out of Kansas rather than alfalfa or corn. If a steer be sent to market it carries away only about \$1.79 worth of plant-food from the soil, and this means a direct saving of \$7.12 in the ton by feeding alfalfa inside the state.

WHAT ALFALFA DOES.

Alfalfa, being a legume, gets practically all of its nitrogen from the air, and may be depended upon to leave the soil richer in nitrogen after it has been gathered. Most Kansas soils contain about two per cent of potash. So, if, as the scientific men of the Kansas State Agricultural Colleges say, 3,000,000 pounds is accepted as the weight of an acre foot—one foot of soil an acre in extent—two per cent would mean 60,000 pounds of potash in the first foot of an acre.

THE ROOTS GO DEEP.

It takes 33 pounds of potash in the soil to make a ton of alfalfa. However, there is enough of this substance in the first foot of soil, one acre in extent, for about 2,000 tons of alfalfa. The roots of this plant, as most farmers know, go down 10 to 12 feet. As the subsoil is as rich in potash as the surface, a process of multiplying will show an amount of potash large enough to stagger most minds. The conclusion is, therefore, that there is enough potash in the soil of Kansas to grow alfalfa indefinitely.

So the only important thing left to consider is the 51 cents worth of phosphoric acid, a substance in which Kansas soils are notably deficient. While not absolutely certain about it, Leland E. Call, assistant professor of soils, believes that alfalfa leaves enough nitrogen in its roots to pay for the 51 cents worth of phosphoric acid.

DO YOU KNOW THE COMPASS?

Rural Scouts Must Be Familiar With the First Sixteen Points.

Do you know the points of the compass? Do you know, even, how many points there are?

To belong to the Rural Life Boy Scouts, an organization being formed by the extension department of the Kansas State Agricultural College, a member must know the points of the compass. The first sixteen points are:

North.
Northeast by north.
Northeast.
Northeast by east.
East.
Southeast by east.
Southeast.
Southeast by south.
South.
Southwest by south.
Southwest.
Southwest by west.
West.
Northwest by west.
Northwest.
Northwest by north.

Arranging for Tree Seeds.

The forestry department is collecting large quantities of tree seeds in its own plantings and elsewhere. C. A. Scott, the state forester, hopes to collect five hundred bushels of black walnut seed, fifty bushels of black and honey locust seed, and several bushels of redbud catalpa, and other tree seeds. These seeds will be planted here and at the forestry stations in Western Kansas.

THE KANSAS INDUSTRIALIST

Volume 37

Kansas State Agricultural College, Manhattan, Saturday, November 5, 1910

Number 6

Y. M. C. A. NEEDS HELP.

A DEBT OF \$6,400, MOST OF IT DUE JANUARY 1.

If \$5,000 is Obtained by the First of New Year a Contribution of \$500 Becomes Available—It's the Students' Home.

The Young Men's Christian Association in Manhattan owes \$6,400. Of this amount, \$5,000 must be obtained by January 1. The international committee will turn over to the association \$500 if the remainder of the debt is paid by that time. The students of the Kansas State Agricultural College have paid \$16,291.55 of the \$29,543.50 already contributed to this project.

The Young Men's Christian Association building was erected in 1907. Students conducted the campaign, and had all the money pledged at one time. But shrinkage in the pledges, additions to the cost of the building and interest on the money put the association in debt \$6,400. This is in two notes held by the First National Bank of Manhattan, one for \$3,000 and the other for \$3,400. The association owed \$8,500 last January. A campaign to wipe out that debt resulted in getting \$3,500. It was believed then that this amount, with the old pledges outstanding, would meet the remainder of the debt. But a vigorous effort, with the assistance even of lawyers, to bring in the money on these pledges revealed the fact that \$5,000 of the old pledges were not good, in some cases from inability to find the signers of the pledges, in others because they were signed by minors who refused to pay.

THE PLEDGE OF \$1,000.

It is this amount that must be obtained. At the time of the original campaign, the international committee of the Young Men's Christian Association obtained a pledge of \$1,000 from a wealthy man in the East. One-half of this was paid at the time, the other half to be paid as the last \$500 of the debt if obtained within a reasonable length of time. The assurance has come from "Dad" Elliott that this amount will be good January 1, 1911, if receipts can be shown that all other debts are paid at that time.

The student body has made great sacrifices for the success of this work. Twenty-four students contributed \$100 each, and most of these have had to work part of their way through college. One student put in eight hours extra work a day at the dairy barn to make a \$75 payment one year. Others have cut out one meal a day to save. Many have toiled vacations to make good their pledges, and the greater number that has made these sacrifices did not stay in college long enough to get any benefit of the building.

The sources of contributions to the present have been:

1529 Student contributions.....	\$16,291.55
189 Alumni contributions.....	3,866.00
94 Faculty contributions.....	2,526.85
185 Business men's contributions.....	4,959.15
99 Women's contributions.....	521.50
98 Outside contributions.....	1,378.45
Total	29,543.50

It has been asked why should not the people of Manhattan pay for the Y. M. C. A. building? The answer to this may be found in the fact that it is not distinctly a city building, but a student building, owned and controlled by the students. The business men of the city never have enjoyed any use of the building until this year, when a physical director has been employed. It can not be expected that the city should bear this burden for the students who come from all parts of the state.

The association membership now numbers 585, the largest in its history in this city. It is the third largest association in Kansas. More than 250 men are regularly taking gymnasium practice at least twice a week. This, it will be interesting to know,

is a larger number of men in the gymnasium than ever has been found in the classes in the Kansas City Athletic Club that has a membership of approximately 1,300.

The Y. M. C. A. in Manhattan is conducting eighteen Bible classes, and it has other religious meetings. In its boys' camp last summer it entertained 26 of the boys of the town. It conducted an interstate Sunday-school track meet last spring with 56 entries, and it is coöperating in every possible way with the churches of the city for the moral and religious welfare of the college students. All its work is done by one secretary, one physical director who has no assistant, and an assistant at the desk for six hours a day. No more help can be employed with the funds available.

TO HONOR PRESIDENT WATERS.

The Saddle and Sirolo Club of Chicago to Have His Portrait in Its Hall.

The portrait of H. J. Waters, president of the Kansas State Agricultural College, is to be placed in the hall of the "Saddle and Sirolo Club," of Chicago. The rules regarding the placing of portraits in this hall are very strict and upon only a few is such an honor conferred. The hall now contains the portraits of forty or fifty of the leading agricultural men in this country. It is to men prominent in agricultural affairs what the Hall of Fame in Washington, D. C., is to men prominent in national affairs.

WHAT SOIL SURVEYS MEAN.

The College is Getting Information That Will Be Valuable to Every Farmer.

Every farmer likes to know just what his soil contains and what it ought to grow. If anything is lacking he should know all about it so he may supply the needed quality. Farmers might never know these things—for soil surveys are expensive if privately conducted—if the agricultural college had not started a survey of its own.

This survey will show the present condition with respect to the elements of fertility, to determine what changes cultivation has brought about, and to ascertain what treatment will be required to retain their productiveness. The amount of plant-food the soils contain is determined in a chemical laboratory, so that ultimately every farmer may know just what his land is worth, how long it will last, and to what crops it is best adapted. In time, land will be bought and sold, farmed and managed, on the basis of the results of these soil studies that the college now is making.

T. K. Tomson is Dead.

T. K. Tomson, the man that bred Benefactor, the great Shorthorn steer of the Kansas State Agricultural College, died Wednesday at his home in Dover, aged 84 years. He had lived there since 1860. Mr. Tomson had two sons in this college at one time, Frank and James. In the American Royal last year and this year, Mr. Tomson showed the champion cow. Mr. Tomson's funeral was Thursday afternoon.

J. B. Parker to Leave.

J. B. Parker, assistant entomologist, has accepted the chair of biology in the Catholic University of America at Washington, D. C. He will work for his doctor's degree during the summer at Johns Hopkins University or some Washington institution. He will leave for his new field about November 15.

Regents to Meet Wednesday.

The board of regents will meet Wednesday, November 9. This probably will be the last regular meeting of the year.

A PRODUCT HE WASTES.

THE AVERAGE FARMER OVERLOOKS THE HOME-MADE FERTILIZER.

Some Important Questions Are Discussed in a Bulletin From the Department of Chemistry—A Review of Recent Tests.

Not many commercial fertilizers are extensively used in Kansas. A state law was passed in 1907 making it illegal to sell, offer for sale or have for sale any commercial fertilizer not officially registered by the director of the experiment station of the Kansas State Agricultural College. Previously to registering the manufacturer or seller of any brand of commercial fertilizer is required to submit a statement of its guaranteed composition. If this is satisfactory to the director, he registers the fertilizer upon the payment of a registration fee of twenty-five dollars by the manufacturer or seller. This payment is once for all. The law forbids changing the guaranteed composition of any brand of fertilizer after it is registered. This is to protect consumers in the use of a given brand which, if changes were permitted, might be found quite unsatisfactory at later dates.

AN IMPORTANT BY-PRODUCT.

After discussing at length the constituents of many commercial fertilizers, the great importance of conserving and using farm manures is emphasized in a bulletin recently issued from the department of chemistry of the Kansas State Agricultural College. The book is by J. T. Willard, chemist in charge, and C. O. Swanson and R. C. Wiley, assistant chemists. Considerable quantities of the important elements of soil fertility, the bulletin says, are contained in the food consumed by domestic animals. The actual commercial value of this is not fully realized by most farmers, and the value of farm manures as compared with commercial fertilizers is not appreciated.

HOW IT FIGURES UP.

The percentages of fertilizing elements in farm manures vary greatly, depending upon the care with which they are protected, the character of the feed consumed by the animals and the extent to which rotting has progressed or water evaporated. The figures for the fertilizing constituents are always low, but they are present in readily available form and the accompanying organic matter has itself a highly beneficial effect on the land.

Even with these low percentages the total amount of plant-food in the manure produced on a farm reaches very significant quantities. Here is a table calculated from the observations of several men. It may serve to bring out strongly the value of this neglected farm product:

Fertilizer constituents voided by one animal in a year, and the value, taking nitrogen at 20 cents, phosphorus at 8 cents, and potassium at 6 cents a pound.

	Nitro-	Phos-	Potas-	
	gen.	phorus.	sium.	Value.
Horse.	125 20	20 90	35 90	
{ Am't....	\$25 04	\$1 67	\$2 15	\$28 86
{ Value....	170 60	11 40	89 30	
Cow.	\$34 12	\$0 91	\$5 36	40 49
{ Am't....	8 40	2 40	11 90	
{ Value....	\$1 68	\$0 19	\$0 71	2 58
Sheep.	11 90	4 60	9 90	
{ Am't....	\$2 38	\$0 37	\$0 59	3 34
{ Value....				

If by test-crops or otherwise the farmer has decided which of the fertilizers his soil requires he may buy them and mix them himself. Sometimes these fertilizers are lumpy and require to be finely ground if they are to be uniformly distributed.

All that is required is a smooth floor, shovels, and a screen of three or four meshes to the linear inch. The fertilizers purchased, though they may have been finely ground, are liable to pack in the bags and become lumpy. The rather coarse screen

specified is for the purpose of separating these lumps, which must be pounded up until all will pass the screen.

In mixing, the most bulky of the fertilizers is first spread out evenly on the floor in a layer a few inches thick. The next in bulk is then spread evenly over this, and so on until all are spread out. The mass is then shoveled to one side in a ridge or pyramid in such a manner as to mix the different parts as much as possible. The shoveling is repeated two or three times, making three or four shovelings of it altogether.

Analyses made of home mixtures so prepared have shown that satisfactory uniformity in composition may be obtained, and field experiments with such fertilizers have given results equal to those afforded by factory-mixed fertilizers of the same composition. The saving in cash outlay is considerable and is well worth attention.

The subject will be further considered in next week's issue.

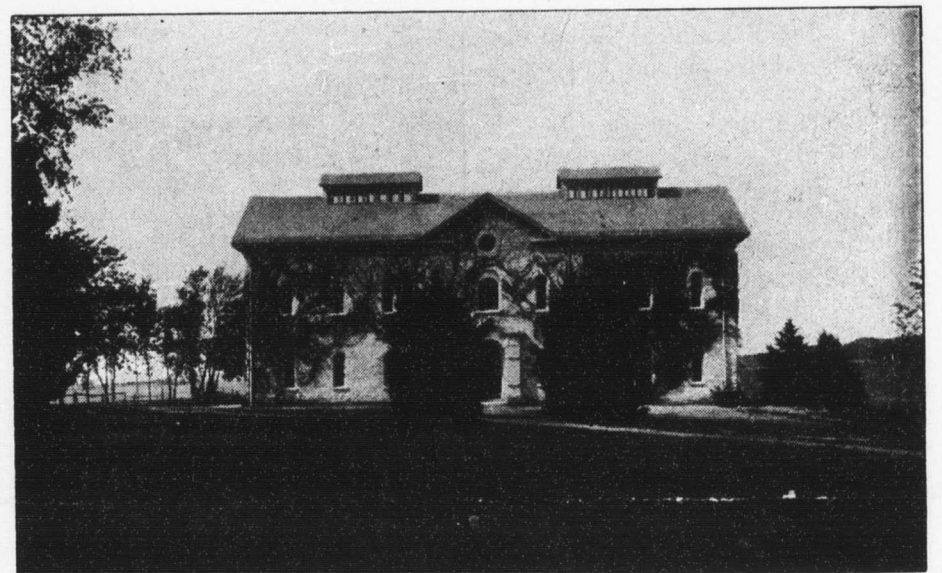
SQUAD RIGHT, HEP, HEP!

DRILL DAYS ARE HERE AGAIN AND CAPTAIN BOICE IS BUSY.

Military Service on the College Campus the Best Possible Exercise for Laggard Feet—350 in the Cadet Corps—The Officers.

"Squad right, March! Hi, there, you man on the pivot, stand fast. Squad halt—that means all of you." Nothing like a few weeks of military drill at the Kansas State Agricultural College to take the awkwardness out of feet that are heavy and arms that hang from stooping shoulders. Nothing like drill to instill the martial spirit into boys; to make them hold their heads up and keep their eyes to the front; waist held in, feet properly planted when they touch the ground, with the toes at 10 minutes to 2, as the drill sergeant says.

Captain Charles Boice, recently promoted from the rank of first lieutenant, is again the commandant this year—



The Old Armory, Erected in 1868.

STUDENTS SHOULD JOIN THE A. A.

President Waters Urges the Importance of Encouraging the Proper Spirit.

President Waters believes in athletics. He believes that every student should belong to the athletic association and help in shaping the athletic policy of the college. President Waters has issued the following statement in regard to the association:

If we make application for membership in the Missouri Valley Conference, it will very much help our case to be able to show a large enrolment in the Athletic Association. In any event, I should strongly urge every student to join the Athletic Association and take part in the shaping of athletics and developing a proper spirit in the college.

(Signed) H. J. WATERS.

KINZER'S BOYS TO SALINA.

A Visit to Lamer's Stables and Practice in Judging Imported Stock.

Thirteen students in the department of animal husbandry at the Kansas State Agricultural College, led by R. J. Kinzer, professor, and Turner R. H. Wright, assistant, went to Salina October 31. The party visited there the stables of C. W. Lamer, an importer of Percheron and Belgian horses.

Mr. Lamer imported 60 horses of these breeds last year, and sent them to Kansas City. Most of the shipment is now in Salina. The students had these fine horses at their disposal for judging work. The visit was highly instructive.

Assembly Days Changed.

The students' assembly will be Wednesday, Thursday, Friday and Saturday of next week, leaving Tuesday open for the meetings of the class organizations. The change was made to favor the Athletic Association so that its members might have an opportunity to discuss matters that they will present to the board of regents.

his last. Edward Claeren, U. S. A., retired, is his commissary sergeant. The college cadet corps has an enrolment this fall of 350 or more. Six companies have been organized and officers appointed. The list will be found elsewhere.

The commissioned and non-commissioned officers are appointed by the commandant, subject to examination. They receive commissions and warrants from the president of the college.

THE ARMORY'S HISTORY.

All guns and ammunition are kept at the armory. This building was erected in 1868, as a west wing to a large structure having several wings. It was used originally as a barn, but in 1873 it was transformed into a class-room building. In 1885 the department of veterinary science claimed the building, but when the new veterinary building was completed the old structure was used only as an armory.

A fact not generally known away from the agricultural college is that all boy freshmen and sophomores must take the prescribed military drill. The federal government assigns a commissioned officer to the college, usually for two years. Every boy must get a uniform as soon as he enters college. In most cases the drill duty is thoroughly disliked, but Kansas boys are said to go into the duty cheerfully in a majority of instances. The discipline is a bit hard for them to swallow at first, but they soon become accustomed to it. Occasionally young men stay in the corps longer than the rules require and become officers.

The band is under the leadership of G. A. Westphalinger. The musicians practice daily. They play Thursdays for dress parade.

"A knowledge of his own heart is the best key to hearts of others."—*Expositor's Bible*—Plummer.

THE KANSAS INDUSTRIALIST

Issued weekly during the college year by the Kansas State Agricultural College, Manhattan, Kansas.

PRES. H. J. WATERS, Editor-in-chief
PROF. C. J. DILLON, Managing Editor
DR. J. D. WALTERS, Local Editor

Except for contributions from officers of the college or members of the faculty, the articles in THE KANSAS INDUSTRIALIST are written by students in the department of industrial journalism, under the direction of Prof. Charles Dillon.

The typesetting and other mechanical work is by students in the school of printing, of which J. D. Rickman is superintendent. Both these departments are in Kedzie Hall.

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SATURDAY, NOVEMBER 5, 1910.

GRADUATING INTO OVERALLS.

The three greatest epochs in the educational history of the world, President Schurman, of Cornell University, recently declared, were the founding of the first university at Salerno; the introduction of scientific research, as applied to the industries, in the University of Berlin by von Humboldt; and the passage of the Morrill Act by which agricultural colleges became possible in the United States. This was deserved recognition of the important effect upon the country's present and future certain to result from the practical and practicable instruction offered in agricultural colleges, manual training schools, or technological institutions. To emphasize this fact was not to disparage the curriculum of the ordinary university. It was the candid admission by one of the country's foremost thinkers that the world of to-day is demanding men and women trained for service, men that can do things the world wants done, and do them as they are done in every-day business life.

"Our universities, our colleges and a few of our high schools," said President Waters, a few mornings ago, in students' assembly, "are now eager to give instruction in subjects that, yesterday, they would have scorned as fit only for the shop and for the apprentice. There is a rapidly growing union between education and the industries, to the great benefit of both and to mankind. It dignifies labor to find it respected and demanded of the students of the great educational institutions. It elevates an industry to have men learn of its deep secrets from the world's great masters."

In America men are being educated into jumpers and overalls. In England, as Alfred Mosley, that country's great educator, said, they are educated into frock coats and gloves. In this country, he declared, the keynote of education is efficiency.

Technical and industrial education, President Waters pointed out in his address, must not be restricted to the colleges and universities, for the very good reason that too small a part of the total population gets into these institutions. And it will not do to call the problem settled when these subjects are introduced into the high schools. They should go into every public school in Kansas, whatever the grades may be.

"No one," said President Waters, "will deny that we are not prepared at present to teach, in a thoroughly satisfactory way, in the high school, and especially in the grades, the subjects of agriculture, manual training, and domestic science. But it will be admitted by everyone acquainted with the facts, that we can teach these subjects in the secondary, and even in the primary grades, more successfully today than they were taught thirty or forty years ago when they were introduced there. It will require less time, less experimenting and less effort successfully to introduce these subjects into the secondary schools than were required to introduce them into our colleges."

"As good school facilities must be provided for the boy and girl in the open country as are provided for the boy and girl in town and city. We cannot afford to employ our public school system to accelerate the drift

from the farm to the city. If enough people are to stay on the farm to supply the world with bread, and if they are to be intelligent enough to produce this bread at a price that the world can pay, the call of the city to the country must fall henceforth upon unwilling ears.

"We have been in the habit of considering this whole question of rural population, condition of country life, bread supply, etc., as a class problem and of interest only to the farmer. In very truth, this does not seriously concern the farmer, but does vitally concern the consuming public. For, so long as there is a shortage of producers and a surplus of consumers, prices will be satisfactory to the producer and unsatisfactory to the consumer. So long as rural population is decreasing and urban population is increasing, land and foot values must continue to rise."

A NEW DIVORCE ELEMENT.

"Lack of psychical cohesiveness" is the latest domestic danger leading to divorce recently proclaimed in Kansas City. Charles A. Elwood, professor of sociology in the Missouri State University, is the discoverer. This will be very interesting to students of sociology. For the convenience of those that have no time to consult the dictionary, it is proper to say that "lack of psychical cohesiveness" is a mental condition likely to result, if allowed to continue, in a call for the police. It has been referred to since long before the West Trafficway squabble began as incompatibility, and it produces the same discord in the home.

Prof. Elwood's designation is the last possible refinement of a subject that has made tiresome reading for years. It may be put in a class with the expression originated by Jacob Billikopf, superintendent of the Jewish Educational Institute in Kansas City. Mr. Billikopf declared that many divorces were the result of "Collusion in desertion." Both classifications point to the fact that in Kansas City, as elsewhere, there is a lot of mighty cheap men and women that hesitate at nothing to nullify the agreement to bear with each other as soon as that agreement imposes upon them some of the inevitable, heavy responsibilities that go with married life. "Lack of psychical cohesiveness" is another way of saying that two persons have reached the parting of the roads when the spiritual or mental impulses of each have become antagonistic. Metaphysicians are agreed that when this condition exists it is time to call the wagon.

THE STUDENTS' Y. M. C. A.

Men and women in every part of Kansas should contribute to the best of their ability to pay off the debt of the Young Men's Christian Association in Manhattan. This money must be paid by January 1 if a fund of \$500 is to be available. The account of the association's financial condition will be found elsewhere in this paper.

The Young Men's Christian Association building in Manhattan is distinctly a student enterprise. Not until recently did any citizen of Manhattan have the chance to use its comforts and conveniences. It is the students' home, whether they have a membership or not—a place to visit and a place to read or write. These students, nearly 2,000 in number now and certain to exceed that number before the spring term, come from every county in the state. They or their parents should be glad to bear the burden of paying for such facilities.

Students in the past have worked loyally for this project. Those that came later should do the same. It needs their help. It is entitled to it. It is wrong that the men in charge of this necessary institution for the proper handling of students should have to plead for years to be relieved of a pressing debt. It belongs to the people and the people should pay it.

To pile up your wealth in a safe deposit box is to lose the increment. Make your money work.

A Golden Text.

For I say unto you, I will not drink of the fruit of the vine until the kingdom of God shall come.—Luke 22:18.

THANKS FOR "THEM WORDS."

What the Press of the Country Says of The Kansas Industrialist.

Modestly, but with much satisfaction, THE KANSAS INDUSTRIALIST reprints here some of the gracious words the newspapers of the country have said about its altered style. A little praise, a bit of encouragement now and then are wonderful stimulants for workmen.

"I have looked over the paper and am much pleased with its appearance, as well as the manner in which the

men as well as with those interested in the great work being done at the college. Your make-up is fine—like your type—and the general appearance could not be better."—H. E. Montgomery, *The Junction City Union*.

"I write to say how well pleased I am with the new KANSAS INDUSTRIALIST of October 22. I am at a loss to say which part of it is the more satisfying—the editorial or the mechanical. Its information and inspiration easily outstrip any single issue of any farm paper I know; and its make-up, its general appearance, its balance, its satisfying effect upon the eye, its delightful clearness of print and its judicious headlines make a close call for perfection. I congratulate all concerned."—Edwin Taylor, member of the board of regents, *Edwardsville, Kansas*, October 22.

October in Kansas

By W. E. Blackburn

The very air is invigorant; fragrant from the harvest, spiced with wood smoke, bracing from the first frosts, scintillant with the glorious sunshine that fills the shortening autumn days with splendor and makes thin and luminous the attending shadow.

"Bob White" shrills of "more wet, more wet," his Quakerish little wife, with half-grown brood, trimly speeds across the roadway into the ripening corn, or with musical "whir—r—r" rises, to dive into the distant sea of undulating brown.

Prairie larks trill and carol, on the rusty wire, or perched on the infrequent posts that hold the cattle from the ripened field. Hawks fly low; frightened sparrows flutter into trees and hedge row; rabbits scurry from bare pastures to grassy covert, or sit erect and watch with distended eye, quivering nostril, and rigid ear the impending danger.

The murmur of voices, the morning cock crow, the lowing of cattle are as distant music, carried softly to the ear by the voluptuous air.

Corn shocks dot the field—tents of an army that stand nearby in whispering ranks. A multitude of peace and plenty; no arms; no equipment, but a haversack of golden grain on hip or shoulder. Save a weary few, they stand expectant, awaiting to deliver their garnered wealth, be mustered out and with empty pockets, light hearts and fluttering banners retrace their steps via the mouldering way to the place whence they come, and rest. In rusty velvet fields, big, dusty haystacks stand in herds or gather in about the barn, shouldering one another in ponderous good humor.

From the inspiration of the caressing air, the peaceful, plenteous view, satisfied achievements of a summer's work, of goodly store from Nature's plenty, we look with brightened eye, bounding blood and defiant head, to the north, undaunted by the icy breath that tells of coming snow.

contents have been prepared. I wish you success."—C. A. Lukens, editor *Farm Implement News*, Chicago.

I think THE KANSAS INDUSTRIALIST in its new form is a great improvement. I believe it will be a fine advertisement for the college.—Arthur Capper, *Topeka*, member of the board of regents.

"The paper is a typographical gem. . . . It couldn't be better printed or have more legible type. It looks, mechanically, like a type-founder's specimen newspaper, which is supposed to be—and generally is—perfect in typography and presswork."—Frank Evans, foreman of *The Kansas City Star's* composing-room.

"Will you be so good as to put the rejuvenated and esteemed and praiseworthy and also augmented INDUSTRIALIST on the list for *The Star's* 'Kansas Notes' department? We need it in our business. Indeed, since the first copy came, a week ago, the office has been in a turmoil waiting for the next issue. Believe me.—Charles A. Blakesley. (Mr. Blakesley writes the *Starbeams*, the Kansas Notes and many of the scintillating editorial paragraphs in *The Star*. He was also the founder of the famous "Cinder Beetle.")

"Our exchange man just now called my attention to the first issue of the new KANSAS INDUSTRIALIST. I told him that from the looks of the sheet he, no doubt, had found a whole lot of good copy in it, and he said he had—just what he wanted. I wish to congratulate you on the appearance of your paper. If others can find as much good stuff as our man did it will be very popular with the newspaper

"For thirty-five years the Kansas State Agricultural College at Manhattan has been publishing a newspaper primarily to disseminate information about farming throughout the state. This has been part of what may be called the university extension work of the college—a work of the first importance, since it brings the schooling of the Manhattan institution to the doors of tens of thousands of farmers who could not spare the time to attend the college.

"The newspaper, THE KANSAS INDUSTRIALIST, has been printed as a small pamphlet weekly. With the current issue, under the management of Prof. C. J. Dillon of the department of industrial journalism, recently of *The Star*, THE INDUSTRIALIST appears in a new and exceedingly attractive form. It is now a four-page newspaper, each page about two-thirds the size of a page of *The Star*. Typographically it is a model of clearness and beauty. The new form makes it possible to display the contents of the paper to much better advantage than before. The man who picks up THE INDUSTRIALIST is now lured from column to column. He isn't likely to put it down until he has read it through.

"Under the management of Prof. Dillon the news of scientific agriculture is now presented in an eminently readable form, as far as possible removed from the dull technicality of the average scientific paper. The new KANSAS INDUSTRIALIST is a successful example of the application of modern journalistic methods to the field of scientific endeavor."—*The Kansas City Star*.

The Rapture of the Year.

While skies glint bright with bluest light
Through clouds that race o'er field and town,
And leaves go dancing left and right,
And orchard apples tumble down;
While school girls sweet, in lane or street,
Lean 'gainst the wind and feel and hear
Its glad heart like a lover's beat—
So reigns the rapture of the year.

Then ho! and hey! and whoop-hooray!
Though winter clouds be looming,
Remember a November day
Is merrier than mildest May
With all her blossoms blooming.

While birds in scattered flights are blown
Aloft and lost in dusky mist,
And truant boys scud home alone
'Neath skies of gold and amethyst;
While twilight falls, and Echo calls
Across the haunted atmosphere,
With low, sweet laughs at intervals—
So reigns the rapture of the year.

Then ho! and hey! and whoop-hooray!
Though winter clouds be looming,
Remember a November day
Is merrier than mildest May
With all her blossoms blooming.

James Whitcomb Riley.

SUNFLOWERS.

Some women should sit behind a screen when they play the piano.

The world's problems to-day are technical problems.—President Waters.

Thieves stole a quantity of bacon Sunday night from a store in Kansas City. The safe, doubtless, had been left open.

A writer works best in a quiet place. This may explain why Walt Mason, "the best-paid poet in America," makes his little \$5,000 a year.

President Taft has been elected an honorary Boy Scout. The motto of this organization is "Know the Secrets of the Country." Is the President eligible?

Guests in the burning New Elms hotel at Excelsior Springs were slow in leaving the building. Doubtless they thought it was just an ordinary Excelsior Springs night.

"Subscriber," the old reliable, adds this to the frantic objection to smoking in the street-cars in Kansas City. "More than once I have had the ashes blown or knocked into my eyes." Any man that has that done is foolish.

"Henry Martin was thrown eight miles from town," gravely announces a Pana, Illinois, paper, "while out driving Saturday." This is believed to be the longest throw on record. It has been referred to the sporting editor.

In a store window on Poyntz Avenue is this sign:

* UNDERTAKING. *
* LEAVE ORDERS FOR COAL. *

Twelve sewing machines were in one of last month's college bills and, probably for business reasons, were charged to the music department. A clerk, who is wasting his time keeping books, desired to be informed if these machines were Singers.

To read the papers of Independence, Missouri, one would suppose Mr. Coronado came over especially to camp at Independence and that he camped nowhere else while in this country. Corny spent several days in Manhattan in 1540 or thereabouts. A monument stands where he camped.

Music hath charms, all right; but if you ever live with a cornet on one side and a clarinet on the other, practicing early and late, and 9,768,132 birds singing at 4:30 every morning, you will conclude that there are moments—but why complain against the little items that add to the piquancy of life?

Sylvia, Kansas, must be a monotonous place. The girls organized, a few days ago, and boycotted young men that had not properly entertained them. That was bad enough, but the next day the mayor, one Austin, issued a proclamation warning young men and others against destroying property Monday night, Halloween. What connection is there between these two happenings?

"Newton Girls Are Getting Married," exclaims the *Weekly Kansan-Republican*, in a scare head, a few days ago. Then follows the item to the effect that "everyone was much surprised when Miss So-and-so married Mr. What'shisname. This surprise may be justified, and the *Kansan's* excitement over the fact that the girls are getting married may be based upon sound reason. Far be it from us—not having seen the Newton girls.

ALUMNI NOTES.

Helen Halm, '08, is teaching domestic science at the Texas State Normal.

K. C. Davis and Fannie (Waugh) Davis, both of the class of 1891, were made happy by the birth of a daughter, Louise, October 15.

Lucy Needham, '08, is teaching domestic science, physiology and chemistry at the Florence University for Women, Florence, Alabama.

Clara Pancake, '03, is attending Teachers' College, Columbia University, this year. Her address is 527 West 121st Street, New York City.

Marcia E. Turner, '06, is very much pleased with her position as a teacher of English in the high school of Fort Scott, Kansas. Her address is 518 Eddy Street.

F. C. Sears, '92, professor of pomology in the Massachusetts Agricultural College, was a judge, recently, at the Canadian apple show at Vancouver, B. C.

R. A. Carle, '05, visited the college recently. He is still connected with the Westinghouse Company of Pittsburgh, Pennsylvania, and is installing generators in Maryland and the South.

A. D. Holloway and Margaret (Cunningham) Holloway, both of the '07 class, are now living at Marysville, Kansas. Mr. Holloway has recently been made Y. M. C. A. secretary of Marshall county.

R. E. Blair, the man that S. C. Mason, '90, picked from the class of 1910 to help him in the testing gardens on the United States farm at San Antonio, Texas, recently sent the horticultural department some fine specimens of figs, persimmons, and pomegranates.

Marie Lechrone, a former student, was married, October 27, to J. E. Brock, '08, at Winfield, Kansas. Only a few friends were present. Mr. Brock formerly was manager of the college bookstore. Mr. and Mrs. Brock left for Burlington, Kansas, immediately after the ceremony.

Mamie Hasselbroek, '04, has been placed in charge of the domestic science department of a state agricultural school at Monticello, Arkansas. This is a new institution and Miss Hasselbroek is permitted to equip her department in accordance with modern ideas. Her friends will look for a successful administration on her part.

G. H. Failyer, '77, professor of chemistry here for many years, is the author of Bulletin No. 72 recently issued by the bureau of soils, United States department of agriculture. This bulletin gives an account of the investigation of a large number of soils from many parts of the United States, the results of which indicate the very wide distribution of barium. This element has special interest because of its connection with the loco disease.

J. A. Conover, '98, after an absence of nine years was a much interested visitor last week. Mr. Conover has made an enviable reputation as a promoter of dairying in the South. He is now employed jointly by the United States Department of Agriculture and the North Carolina State Department of Agriculture. He is in charge of dairy extension. The work has developed to such an extent that it requires the assistance of two other persons.

Changes of address: Paul V. Kelly, '10, 267 Cherokee Street, Denver, Colorado; Ruby Buckman, '08, 104 East Tent Street, Hutchinson, Kansas; V. C. Bryant, '09, 2250 Fulton Street, Berkeley, California; Nellie L. Thompson, '10, Agricultural College, North Dakota; DeForest Hungerford, '10, University Farm, St. Paul, Minnesota; L. B. Mickel, '10, Clinton, Illinois; Wilma Orem, '10, Walsburg, Kansas; Ethel R. Coffman, '10, Lapwai, Idaho; R. H. Wilson, '09, Parke, Davis & Co., Detroit, Michigan; H. S. Records, '09, 1919 Ohio Avenue, Connersville, Indiana; Maude (Harris) Gaston, '08, 1749 Monroe Street, Chicago, Illinois; Donald Ross, '08, 2559 Washington Boulevard, Chicago, Illinois; Cecile Allentharpe, '07, Tie Siding, Wyoming; C. H. Withington, '06, 1264 Buchanan Street, Topeka,

Kansas; Margaret Haggart, '05, care of Johns Hopkins Hospital, Baltimore, Maryland; R. A. Seaton, '04, 198 West Brookline Street, Boston, Massachusetts; L. B. Bender, '04, Fort Andrews, Massachusetts; Minnie L. Copeland, '98, 15 West 84th Street, New York City; W. O. Peterson, '97, 405 Troup Avenue, Kansas City, Missouri; Maud (Gardiner) Obrecht, '93, 1300 Garfield Avenue, Topeka, Kansas; S. C. Mason, '90, 133 East Avenue 52, Los Angeles, California.

THE C. B. R. & W. R. R. FINISHED.

No Further Extension of the Road Now Is Contemplated.

C. B. R. & W. R. R.—the college boiler-room and western railroad—has at last reached its objective point—the coal fields west of the new engineering building. All fall the heat and power department has been contemplating this extension, but not until last week was the plan realized. Two men have performed the feat of grading and laying this track.

It can now get just as cold as it wants to. The hungry boilers will be fed from steel cars and the newly tapped fields will prevent starvation. All that is necessary is to load the cars at the end of the line, push them into the boiler-room and throw the coal under the boilers.

LOCAL NOTES.

John Gillespie, of Topeka, was a campus visitor yesterday.

B. J. McFadden and Charles Wolcott are wearing colors for the Aztecs.

Mr. and Mrs. E. T. Rosenberger are visiting their daughter, Mrs. B. F. Eyer.

The foundry made a run this week. About one hundred and twenty-five castings were made.

The Eurodelphians will entertain the Websters the evening of November 12 in the Women's Gymnasium.

Beds are being prepared for the tulips, hyacinths, narcissus and crocus bulbs that are soon to be set.

J. T. Willard, professor of chemistry, was the speaker in students' assembly Wednesday morning. His subject was "Pure Foods."

The annual meeting of the Kansas Academy of Science will be at Topeka, December 27 to 29. The program will be announced later.

A large force of men is at work on the heating system of the new engineering building. The system is far from complete on account of delay in receiving material.

S. W. Cunningham, teacher in the Normal School, Albion, Idaho, is planning a greenhouse and writes to the horticultural department for information and suggestions along that line.

The animal husbandry department is selling a large number of purebred hogs to the farmers of this and other states. The department shipped nineteen head last week to farmers of Kansas, Arkansas, Missouri, and Oklahoma.

E. A. Vaughn, a member of the junior class, has not yet recovered from injuries received while leading a freshly organized football team, mostly sub-freshmen, against the seasoned cohorts playing under the sophomore colors. His back was badly strained.

C. A. Scott, state forester, went to Sabetha, Kansas, Tuesday. A property owner in that place says his elm trees are being killed by electric light wires that run through the branches. Mr. Scott wished to see if this were true. If the results warrant it, a report of the investigation will be published later.

The horse feeding experiment at Fort Riley, in which 884 will be experimented upon, is being delayed on account of the non-arrival of some of the feed. It will be started in about three weeks, and C. W. McCampbell, of the animal husbandry department, will take up his residence at the fort as the superintendent in charge of the experiment.

HOUSE THE FAIR HERE?

A PERTINENT SUGGESTION FROM AN ALUMNUS OF '04.

Permanent Buildings, Useful the Year Round, C. A. Groves Says, Should Be Erected on College Ground for Kansas Annual Exposition.

To The Kansas Industrialist.—The Kansas Annual Exposition, otherwise the state fair, should be permanently assigned to the grounds of the Kansas State Agricultural College.

Buildings for that purpose should be erected by the state, paid for by a special appropriation. These buildings could be used throughout the year by the college as a permanent exposition to display the state's vast resources. The winter meetings of farmers, the great corn show and other industrial meetings could be held there. The state's citizens and their children would thus have a never-ending educational encouragement, something to show what Kansas can do. Los Angeles, California, maintains just such a display constantly and has maintained it for many years.

The foregoing suggestion grew out of my visit, recently, to the Iowa state fair at Ames. I saw there fine, commodious structures that would be empty, almost, after the brief period of the fair, and thought how large would be the benefit to the people if the displays were maintained when the character permitted, and the buildings used by the college in whatever way its directors deemed wise.

Kansas is a great state, the alumni of its agricultural college are in every part of the world. Its students come from every county, from more than 2000 farms. What a fine force this ought to be for the state's advancement and for the college.

C. A. GROVES, '04,
Edwardsville, Kansas.

THE WEEKLY MENU.

What to Eat and When; by the Domestic Science Experts.

All women wonder, some days, what to have for the next meal. Here are three helpers:

BREAKFAST		
Cracked Wheat		Cream
Baked Eggs		Tomato Sauce
Toast		Coffee
DINNER		
Cream of Carrot Soup		Crisped Crackers
		Pot Roast
Baked Potatoes		Stewed Tomatoes
Whole Wheat Bread		Butter
Pumpkin Pie		Coffee
SUPPER		
Meat Croquettes		Creamed Potatoes
		Cabbage and Celery Salad
Bread		Butter
Spiced Cookies		Orange Sponge
		Tea

And They Met Here.

A wedding of interest to K. S. A. C. alumni was that of Gertrude Grizzell, '08, and Herman A. Praeger, '08, at Sterling, Kansas, October 22. Miss Grizzell was an active Y. W. C. A. worker while in college. Mr. Praeger was business manager of the *Students' Herald* and took an active part in student enterprises. They are to live at Claflin, Kansas.

MUST EAT BETWEEN MEALS.

Stacks of Extras the Students Eat Daily in Nearby Restaurants.

Ever get hungry and want a "piece" between meals? Most of the students are a hungry lot. And since they can no longer sneak into the home pantry for these between-meal luncheons they have to seek other places where extras may be bought for the "price" they happen to have.

It has been estimated that the K. S. A. C. students spend about forty-five dollars a day, perhaps a lot more, in fifteen-cent "snacks." Girls usually spend their money for gum and candy, but the boys must have something a bit more solid. The restaurants near the college sell an average of six dozen buns, eighteen or twenty pies and ten or fifteen quarts of milk at noon every day. Add to this stacks of hamburger

and boiled ham, sandwiches and coffee and tea and you have an idea how the students destroy food.

Cream and chocolate pies seem to outrank all others in the students' favor. Oysters are very popular with the future farmers of Kansas.

THE DAIRY TRAIN'S WORK.

It's a Mighty Serious Business if the Mercury's Story Is True.

This paper took occasion to compliment the esteemed *Mercury*, last Saturday, for its excellent "Campus Chat." Since then a humorist has been added to Brother Vernon's staff. The account printed, Monday, of the dairy special's activities is by far the best thing that paper has had for a long time. Read this:

The "Dairy Special" lecture train, with Director Webster and Mr. Reade, Mr. Wheeler and Hine on board, left Newton this morning for a six-days' trip over the lines of the Santa Fé in Kansas. The trip will end at Marion Saturday at 2:30 p. m. It will run over down about one foot so as to bring it down to city grade and the extra dirt is being thrown off over the south side of the ditch so as to throw the bank farther north. A part of the rapping which will hold the loose dirt in place and the rest is being put in place as rapidly as possible.

It is hoped this unexpected development of what was intended merely to be a lecture tour will not unduly excite the board of regents.

LATER.—The humorist proves to be the new "make-up" man.

COUNCIL ADOPTS A PIN DESIGN.

Only Seniors and Alumni Are Entitled to Wear the Gold K.

The Student Council has adopted the block "K" as the official college pin to be worn only by seniors and members of the alumni. The "K,"

measuring one-quarter of an inch in width, stands in relief in a rough, golden circular field. Outside of this is a space of sufficient size

to contain the initials of the college, the year of the student's graduation, and the course. The pin is smaller than a dime.

Miss Margaret Butterfield, the college secretary, probably will dispose of the pins. This will make them accessible for alumni members and prevent their purchase by students under senior rank. The pins will be sold at cost. The design adopted was offered by C. G. Croyle, a senior.

WHERE IT HELPED FARMERS.

Blackleg and Hog-Cholera Yielded to the College's Remedies.

Blackleg caused the loss of many thousands of dollars for cattle breeders in this state before the agricultural college began sending out vaccine. This preventive is supplied by the college at cost. The same is true of cholera. In the last year the college has saved approximately \$100,000 for farmers by producing the anti-cholera serum and selling it at cost. The fatalities in blackleg have been reduced from 10 to 30 per cent to about 1 per cent. Wherever the anti-cholera serum has been used in an infected herd the saving has been 90 per cent. More than 50,000 doses of it were distributed by the college.

A Dairy Feeding Test.

The dairy department will soon begin a new experiment, the feeding of skim-milk to young calves. This has never been tried at this station. Doubtless the test will be watched with much interest by the dairymen of the state.

Pens for the calves were built this week in the sheds north of the dairy barn.

Testing the Water-Supply.

Manhattan water is to be submitted to a severe test. The bacteriological department is analyzing both the city and the college supply.

Talking of Alfalfa and Shoats.

J. W. Wilson, a hog breeder of Almena, Kansas, had 80 acres of alfalfa last year. He pastured 700 shoats on it and cut, in addition, 100 tons of hay.

Nothing shuts in a life and shuts out joy like the self-considering temper and the self-centered aim.

HOW SCHOOLS CAN HELP.

ONE WAY TO SOLVE THE PROBLEM OF RURAL LIFE.

A Course of Study in the Kansas High Schools Is Suggested by Prof. Holtón—Cut Them Loose from College Control.

By Edwin L. Holtón,
Professor of Rural Education.

How can farm life be made more attractive for children born there? This is the problem that President Roosevelt asked the Country Life Commission to solve, or at least to suggest some action that it might help to solve. In the report by the commission the statement is made that a fundamental step in this direction is "to redirect the work of our public schools toward country life."

In Kansas, where the dominant vocation is agriculture and the majority lives in the open country, this need is rapidly crystalizing into a demand.

How can the high schools of Kansas better serve the people? How can they be re-directed towards country life? Make the high schools the "People's Colleges" in fact as well as name. Arrange the course of study so that the work will function in home, farm and community life rather than in that vague, indefinite something called "mental training" or "formal discipline." Face them toward the vocations rather than toward an indefinite "somewhere."

CUT LOOSE FROM COLLEGE CONTROL.

Whatever may be said in favor of college domination of high school courses of study in the past, unquestionably the need of the hour is more local freedom in making courses of study for the high schools of Kansas. Make the high schools serve the community and state, rather than the colleges. Put in all the high schools a course similar to the following:

FIRST YEAR.			
Boys.		Girls.	
English.....5	English.....5	English.....5	English.....5
Algebra.....5	Algebra.....5	Algebra.....5	Algebra.....5
Agri. Botany.....5	Agri. Botany.....5	Agri. Botany.....5	Agri. Botany.....5
Shop Work, Mechanical Drawing.....5	Shop Work, Mechanical Drawing.....5	Home Economics, Free Hand Drawing.....5	Home Economics, Free Hand Drawing.....5
Stock and Grain.....1	Stock and Grain.....1	Music.....2	Music.....2
Judging.....1	Judging.....1	Music (Elective).....1	Music (Elective).....1
SECOND YEAR.			
English.....5	English.....5	English.....5	English.....5
Plane Geometry.....5	Plane Geometry.....5	Plane Geometry.....5	Plane Geometry.....5
Physical Geog. and Soils.....5	Physical Geog. and Soils.....5	Phys. Geog. and Soils or German.....5	Phys. Geog. and Soils or German.....5
Shop Work, Mechanical Drawing.....5	Shop Work, Mechanical Drawing.....5	Home Economics, Drawing and Art.....5	Home Economics, Drawing and Art.....5
Stock and Grain.....1	Stock and Grain.....1	Music.....2	Music.....2
Judging.....1	Judging.....1	Music (Elective).....1	Music (Elective).....1
THIRD YEAR.			
English.....5	English.....5	English.....5	English.....5
Industrial Chemistry.....5	Industrial Chemistry.....5	Ind. Chemistry or German.....5	Ind. Chemistry or German.....5
Greek and Roman History.....5	Greek and Roman History.....5	Greek and Roman History.....5	Greek and Roman History.....5
Farm Crops 2, Horticulture 2, Entomology 1.....5	Farm Crops 2, Horticulture 2, Entomology 1.....5	Home Economics, Floriculture.....1	Home Economics, Floriculture.....1
Music.....2	Music.....2	Music.....2	Music.....2
FOURTH YEAR.			
American History.....5	American History.....5	American History.....5	American History.....5
Industrial Physics.....5	Industrial Physics.....5	Ind. Physics or German.....5	Ind. Physics or German.....5
Animal Husbandry.....5	Animal Husbandry.....5	Home Economics, Poultry.....5	Home Economics, Poultry.....5
2 Dairying.....5	2 Dairying.....5	Civics (half year).....5	Civics (half year).....5
Poultry.....5	Poultry.....5	Economics (half year).....5	Economics (half year).....5
Civics (half year).....5	Civics (half year).....5	Bookkeeping.....1	Bookkeeping.....1
Economics (half year).....5	Economics (half year).....5	Music.....2	Music.....2
Bookkeeping.....1	Bookkeeping.....1	Music (Elective).....1	Music (Elective).....1

NOTE.—The figures indicate the number of recitations per week.

LIBERAL EDUCATION.

More and more we are coming to believe that a knowledge of, and an insight into, the great problems of the home, the vocations, the community and the state, leads to a broader liberal education than does a study of the subjects that have no relation to present-day problems, and which have no excuse for being in our courses of study, except their supposedly cultural value.

Dr. Snedden, commissioner of education of Massachusetts, the Horace Mann of present-day education, says, "I would rather have my girl take a text-book course in agriculture than a course in latin or algebra." We must cut loose from our deep-seated prejudices, that culture is developed by taking the mind through a course of mental gymnastics on subjects wholly foreign to our environment. There are no facts upon which to base such a theory.

Let us motivate, vitalize, and modernize our Kansas high schools by hitching them up to the fundamental problems of the home, the farm, the community, and the state.

WHO'S WHO IN COLLEGE SPORT.

An Unprejudiced Account of the Weekly Athletic Activities of the Students.

From all accounts the Farmers ran into a big surprise when they invaded the camp of the Creighton bunch at Omaha last Saturday. They had expected to win by a margin of 20 points. They thought themselves lucky to get away with the game, 6 to 2. The Catholics had a good team and the Aggies lacked the "pep" that has stood them in such good stead in previous contests this year.

The solitary touch-down is credited to Whipple in the second period. Starting on their own 19-yard line, the Farmers swept up the field, Roots, Croyle, Holmes and Whipple carrying the ball. When the Catholics' goal was 13 yards away Bates tried a forward pass. Creighton intercepted the oval, and kicked on first down. Bates returned the punt to the 30-yard line. Roots, Sims, and Holmes punctured the Catholic defense to within one foot of the goal, when Whipple was sent through for the touch-down. Croyle kicked goal.

Creighton got its score in the third period, using the forward pass and onside kick for good gains to the Aggie 3-yard line. Here the Farmers held and took the ball on downs. Bates sent Christian around end, but the speedy half was tackled back of the goal-line, chalking up two points for Creighton on the safety.

The Aggies worked the ball in striking distance of the Catholics' goal three times in the last period, but were unable to put it across.

THE LINE-UP.

K. S. A. C.	CREIGHTON.
Stahl, Elliot.....L. E.	Kramer, Hove
Holmes.....L. T.	Young
Cooley.....L. G.	Hopkins
Zoller.....C. G.	Tamm
Hammond.....R. G.	Hall
Roots.....R. T.	Lee
Towler.....R. E.	Marion
Bates.....Q. E.	Philbin
Sims, Christian.....R. H.	Kronek
Croyle.....L. H.	K. le
Whipple.....F.	Morganthaler

The argument that the college will not have good material for a team next fall if it enters the Missouri Valley Conference received something of a jolt last Saturday in the game between the Tyros and Battery C, Fort Riley. True the scrubs were scored on; they did some peculiar things; they fumbled repeatedly. But the material was there. Those new recruits are picking up the fundamentals of the game rapidly and they promise to make good next year.

One of the new men that has the earmarks of a star is a big 195-pounder, Bates by name. He runs an excellent interference and plays a strong, steady defense. His running in the open field reminds one strongly of Carl Mallon of the famous '06 team. Hain played a steady game at center. The race between Collins and Prather for Root's position next fall should be interesting, with the odds slightly in favor of Prather if he continues to develop as rapidly as he has this season. Beeler has had experience at full, and should land that position next fall. The work of Moss at end is deserving of special mention. He is aggressive and fast, and gets off quickly.

The development of a new quarter is nearly always something of a task. The work of Lester Pollom against the Soldiers promises one candidate for the position. He used his head to good advantage and put the "pep" that is so necessary for the winning of games into the team. His drop-kick from the 30-yard line was a beauty.

The game itself was naturally lacking in the class shown in the first-team contests, but was exciting throughout. The Soldiers, though green at the game, made worthy opponents, and forced the Tyros to use all they had to win. Levinus did some pretty work at booting the ball. His drop-kicks were responsible for six of the Soldiers' 11 points. Warner at right end also showed class. The visitors lost the services of their best man when Melonig had to leave the field early in the game with a torn ligament in his right shoulder.

Beeler made the first score in the

second period. A forward pass to Anderson and a long end run by Moss, with excellent interference by Bates, aided materially.

The next score is credited to Levinus, 3 points on a drop-kick. A few minutes later he duplicated the trick.

The tyros got riled and started up the field. Shuster, Collins, Bates, and Noel tore big holes in the army ranks, till the 25-yard line was reached. A neat forward pass, Pollom to Noel, scored another touch-down. The soldiers scored again on the kick-off, tying the score. The rest of the Tyros' scores are credited to Pollom, 30-yard drop-kick, and to Moss on a forward pass.

SUMMARY.

TYROS.	BATTERY C.
Anderson.....R. E.	Zehrer, Warner
Prather.....R. T.	Volker
Burkhalter.....R. G.	Califf
Hain.....C. G.	Windsor
Unruh.....L. G.	Criswell
Collins.....L. T.	Curley
Moss.....L. E.	Davis
Sawyer, Pollom.....Q. R. K. Smith, A. Smith	
Noel.....R. H.	Melonig, Zehrer
Bates.....L. H.	White
Beeler, Shuster.....F.	Levinus

Touch-downs—Beeler, Noel, Moss, A. Smith
Goals from touch-downs—Sawyer. Field goals—
Levinus, 2, Pollom. Referee—King. Um-
pire—Baird. Field judge—Speer. Head lines-
man—Sloan. Score, 19 to 11.

FAKES AND FORMATIONS.

W. A. McKeever, professor of philosophy, has a complaint, possibly a claim for damages, against the Athletic Association. He gave his eldest boy fifty cents recently to pay admission to one of the college football games. After getting in the boy found that owing to the crowd he was unable to see the game from the bleachers. Being a resourceful youth he climbed upon the fence. The view was good. Every play was seen and enjoyed. Other boys were also enjoying the view. Then unkind fate, in the person of a minion of the management, intervened and made them all get down outside the fence. And the professor says his son didn't get his money's worth.

IOWA CITY, IOWA, October 30.—Three more institutions of Iowa are clamoring for admittance to the Missouri Valley Athletic Association. They are Grinnell, Simpson and Morningside colleges. All three of the institutions have made a remarkable showing in football, and Grinnell and Morningside especially are entitled to verbal admittance into the newly formed association of the Missouri Valley. Drake University at Des Moines is being beseeched upon every hand for games with these three schools, and the one which has been scheduled with Grinnell will form one of the best battles of the season.—K. C. Star.

The conference already embraces seven schools. If K. S. A. C. is to get in this year it will have to hurry.

THE SECOND RUN TO FOWLER.

"Shorty" Was Nearly a Minute Slower Than Austin's Record in 1909.

The second cross-country run for the Hamilton medal went to "Shorty" Fowler, with C. B. Stark second. The run was over the 2½ mile course from the Agricultural building to the top of Blumont and return. The time, 13:40, was nearly a minute slower than the record made in the spring of 1909 by Austin, who covered the course in 12:47.

H. P. Wood came in third, followed by V. V. Detwiler, Geo. Winfrey, and C. O. Levine, in the order named.

The third run will be at 4 o'clock Saturday. It is scheduled for three miles, starting from the Agricultural building and circling around Blumont.

For a Square Deal.

John O. Hamilton, professor of physics, spoke in student assembly, Wednesday. His subject was: "A Square Deal." Professor Hamilton told of the different ways that have been tried to suppress cheating in examinations. One way was for stu-

dents to report to the faculty all persons cheating in an examination. This way was received with much disfavor. Another way was to require every student to answer, as a final question of the examination, whether he or she had received or given any help.

The New Cadet Roster.

Commandant, Captain Charles H. Boice.
COMMISSIONED FIELD AND STAFF OFFICERS.
Major first battalion, T. B. Nafziger; major second battalion, R. A. Branson; captain and regimental adjutant, Jno. E. Jenkins; captain and regimental quartermaster, C. G. Fry.

NON-COMMISSIONED FIELD AND STAFF OFFICERS.
Regimental sergeant major, Walter Hepler; sergeant and chief trumpeter, Earl J. Willis; regimental quartermaster sergeant, Q. Campbell; regimental color sergeant, Ray Kerr; battalion sergeant major, first battalion, M. H. Hutchinson; battalion sergeant major, first battalion, M. L. Keithleen.

COMPANY A.

Captain, H. D. O'Brien; first lieutenant, Earl Springer; second lieutenant, Frank Buzzard; first sergeant, Ernest Seal. Sergeants—D. G. Tepfer, G. W. Blain, John Bayles, F. A. Smutz. Corporals—George Brown, Henry Brown, Harry Bird, J. W. Linn, A. L. Clapp, L. L. Horr, Charles D. Strain, A. Wathen.

COMPANY B.

Captain, R. W. Getty; first lieutenant, A. B. Hungerford; second lieutenant, L. E. Hutto; first sergeant, N. A. Gish. Sergeants—O. D. Oshell, W. A. Buck, H. Fenton, G. W. Kendall. Corporals—A. W. Conrow, J. T. Pearson, R. S. Wilson, L. L. Whitney, J. L. Hunter, A. L. Theis, C. O. Levine, H. S. McClanahan.

COMPANY C.

Captain, H. R. Anderson; first lieutenant, C. S. Newkirk; first sergeant, T. R. Bartlett. Sergeants—Henry G. Avery, N. H. Davis, H. R. Johnston, H. H. Olsen. Corporals—Sam A. Krehbiel, H. B. Allan, E. F. Bloom, C. H. Blake, M. E. Hartzler, Don Tawn, Dan Hunt, Elmer J. Bird.

COMPANY D.

Captain, C. F. Turner; first lieutenant, C. A. Leech; second lieutenant, H. L. Cole; first sergeant, A. P. Davidson. Sergeants—R. E. Wiseman, R. E. Karper, N. M. Hutchinson, Stanley A. Smith. Corporals—L. W. Taylor, Laurence Fickel, Roy Winfrey, Charles Klau-mann, P. B. Durrett, J. P. Loomis, V. V. Dry-din, Joe M. Goodwin.

COMPANY E.

Captain, G. L. Campbell; first lieutenant, A. D. Wise; second lieutenant, W. D. Moore; first sergeant, J. B. Wise. Sergeants—F. H. Graham, C. W. Gilmore, A. P. Beamman, F. A. Coff-man. Corporals—Virgil D. Stone, J. L. Robinson, F. T. Rees, Raymond Ollinger, F. C. Cragg, D. L. Ford.

COMPANY F.

Captain, S. M. Ransopher; first lieutenant, J. C. Janer; second lieutenant, Ned Smith; first sergeant, K. Dubois. Sergeants—C. O. Johnson, R. O. Swanson, F. Coburn, Roy M. Phillips. Corporals—Hugh T. Caywood, Don Parkinson, F. Kramer, Walter Lill, J. T. Pear-son, Frances L. Shull, H. R. Pierce.

REGIMENTAL BAND.

Bandmaster, G. A. Westphalinger; principal musician, C. A. Davis. Sergeants—N. B. Need-ham, C. C. Walcott, O. F. McKittrick, H. E. Butcher. Corporals—Ray Williams, C. L. Ip-sen, R. K. Bonnet, B. R. Ellis, Ray Whitney, E. H. Smeis, Leo Rexroad, Lloyd Flanders.

R. J. KINZER A JUDGE.

The International Live Stock Show Chooses the K. S. A. C. Animal Expert.

R. J. Kinzer, professor of animal husbandry in the Kansas State Agricultural College, has been elected a judge in the Galloway section of the International Live Stock Exposition. This is to be held November 26 to December 3 in Chicago. Other judges of cattle sections in which the people of Kansas are interested have been announced in this order.

Shorthorns (breeding classes)—C. E. Marvin, Payne's Depot, Kentucky; T. E. Robson, London, Ontario, Canada; E. M. Hall, Carthage, Missouri.

Shorthorns (fat classes)—J. E. Robbins, Horace, Indiana; John R. Tomson, Dover, Kansas.

Aberdeen-Angus (breeding and fat classes)—Stanley R. Pierce, Creston Illinois.
Herefords (breeding classes)—S. W. Anderson, Blaker Mills, West Virginia; J. A. Shade, Kingsley, Iowa; Robert H. Hazlett, Eldorado, Kansas.

Herefords (fat classes)—One of the above.
Galloways (breeding and fat classes)—Prof. R. J. Kinzer, Manhattan, Kansas.

Symboleer, the champion Angus steer, and other prize winning cattle from the Kansas State Agricultural College herd are to be shown in the Chicago exposition.

Powder Farming Here, Too.

E. R. Angast, of the DuPont Powder Company, is experimenting for the horticultural department in using dynamite to loosen the soil for planting trees. A two-inch hole is put in the ground from thirty to forty inches

COMING TO THE Corn Show?

The big December gathering of farmers who grow the kind of corn that makes Kansas famous the world over.

Premiums Worth \$1,000

Entries for the National Corn Show are made in this meeting. How many prize winning ears can you grow?

The last week in December

In the State Agricultural College buildings. The Kansas Corn Breeders Association in charge. Noted speakers will entertain the visitors with timely talks.

Information about exhibits may be obtained from

E. G. SCHAFER, Secretary,
Manhattan, - - - Kansas

deep. In this hole is put a stick or half-stick of dynamite. This is exploded by electricity. Every shot makes a break in the ground from a foot and a half to two feet in diameter and cracks the soil for several feet around. Tests will be carried on for the week.

A ZOOLOGICAL SEMINARY.

Meetings at the Seventh Hour Every Monday—House Flies.

A zoological seminary was organized October 24 with a membership consisting of students and instructors in the department of entomology and zoology. At this meeting it was decided to take up a historical study of the theory of evolution, to present from time to time reports upon current zoological literature, and to discuss the results of the researches upon which the members are engaged. Meetings are to be held regularly at the seventh hour, Mondays.

At the first meeting Francis B. Miliken presented the results of his study of the breeding habits of the common house fly. He showed that flies breed rapidly on ensilage in mangers and silos.

An Exchange of Apples.

The horticultural department made a shipment, last week, of varieties of apples and persimmons to F. C. Sears, of the Massachusetts Agricultural College. The fruit will be used in the laboratory work of the pomology classes. A similar shipment of Massachusetts apples has been received by Prof. Dickens for the use of the pomology classes here.

Oats as a Chicken Food.

Oats, used with corn and wheat, has been found to be an excellent chicken food. Oats are not generally used, however, because of their cost. They will fatten young chickens for market more quickly than any other feed.

KEEP YOUR PLANT-FOOD.

A TON OF CLOVER HAY STEALS FERTILITY WORTH \$9.04.

Butter, a Ton of It, Selling for \$600, Takes Only Fifty Cents in Value From the Soil—Will Farmers Learn This Lesson?

A farmer who sells a ton of clover hay instead of feeding it to his own cows loses.

Proof: A ton of clover hay worth about \$10 takes away \$9.04 worth of fertility from the soil. When a farmer sells a ton of butter—worth about \$600—he loses only fifty cents worth of fertility from his farm.

These figures are from experts in the Kansas State Agricultural College and are based on the cost of commercial fertilizers. That is, it takes \$9.04 worth of commercial fertilizer to replace the plant-food taken out of the soil by a ton of clover hay, while it takes only fifty cents worth of fertilizer to replace that taken from the soil when a ton of butter is produced.

See the point? It's an argument in favor of dairying.

It is not the dairy farmer that will wake up some morning and find his farm depleted, for in the manure which he returns to the soil he replaces the food spent in making dairy products.

Many of the best Kansas farms are being ruined by continuous cropping. No system of farming excels dairying in respect to its preservation of soil fertility.

If the dairy farm is judiciously managed it will increase in fertility from year to year. In Holland, Denmark, and the Channel Islands, where the dairy industry has been carried on for 500 to 2,000 years, the soil is gradually increasing in fertility. The wheat yield in Denmark to-day is double that of thirty years ago.

HARLAN SMITH.

Some men grow under their responsibility; others merely swell.

THE KANSAS INDUSTRIALIST

Volume 37

Kansas State Agricultural College, Manhattan, Saturday, November 12, 1910

Number 7

WEEDS IN THE ALFALFA?

BUY PURE SEED AND YOU WON'T HAVE THIS TROUBLE.

If You Are in Doubt About It Send the Seed to the Agricultural College and Have It Tested Free.

(Written in the department of industrial journalism for the *Mail and Breeze*.)

Notice any weeds in your alfalfa this year?

Of course you would like to grow alfalfa without the weeds. Every farmer in the country has this laudable ambition. And it is possible, too, if special attention be given to the seed.

Pure seed. Nothing is much more important, and still there are farmers that will use cheap alfalfa seed in which there are all kinds of trash rather than pay a higher price and get the pure article. It isn't really so hard a task as some suppose to choose reasonably pure alfalfa seed. Foreign matter in a body that should be almost a pure yellow will be easily detected.

But to be absolutely sure, or approximately certain, that alfalfa seed is pure, it should be examined by an expert. This service may be obtained at the Kansas State Agricultural College in the department of botany, absolutely free. A farmer or a seed dealer may send samples to this department and have them analyzed and returned promptly.

HOW THE MISCHIEF BEGINS.

The Russian thistle can hardly be detected in alfalfa seed. It cannot be blown out or removed by screening. It is a mighty bad weed to have on the farm. It has been cut down three times in a season and yet has come up and spread from 4 to 6 feet. Dodder, a parasite feared by every farmer and seedman, has soil roots. It fastens these upon the alfalfa and lives upon its strength and its own soil roots die. Canada blue-grass and English blue-grass also are very hard to discover in alfalfa seed, and cheat is the worst in the whole catalogue. It is almost impossible to discover it. However, with most farmers it is possible to buy alfalfa seed that is approximately clean, and to buy any other kind, the cheaper qualities, is mighty poor economy. Most of the alfalfa seed just now comes from the west half or west third of the state. Alfalfa will not produce seed in moist weather. Consequently, the production is most liberal in dry climates. The mustard seed is a pest in Minnesota and the Dakotas, where chemicals have been used to kill it in the fields. It is not found much in this state, but conditions favor its growth.

WHOLE COUNTIES SOWN TO WEEDS.

The farmer who has a fanning mill can do something in his own behalf to get clean seed. Some of the dealers use these small mills. In many parts of the state farmers sell their seed to hardware dealers, who sell it to others in the neighborhood without fanning. As a result, the impurities of one field are transmitted to several, and ultimately the whole county may be affected.

Crab-grass is another part of the farmer's burden. It is one of the meanest grasses that a mysterious providence has permitted to grow where it is not wanted. Nothing seems to injure the crab-grass and no insult has the slightest effect upon it. Every joint of this grass will take root where it strikes the ground. It is found often in alfalfa. A brother in meanness is foxtail, found nearly everywhere in the United States. Foxtail should be guarded against. The seed is about the same size as alfalfa seed. It cannot be blown or screened out, but a special apparatus has been made to get it out of alfalfa seed. This machine is equipped with rollers cov-

ered with canvas. The foxtail seed sticks to the canvas and the alfalfa passes through. The machine has not been used much in this state, if at all.

Many fields are infested with introduced weeds. Many of these weeds come from northern Germany, there being a high demand in this country for German seed. Among the most noted weeds from across the sea is the Roquette, which is used in France as a salad plant. Another is the Centaurea, which comes in many shipments, especially in Turkestan alfalfa.

The adulteration of orchard-grass seed is accomplished by the use of meadow fescue, or English rye-grass seed, or both. Each of these is cheaper than pure orchard-grass seed. Meadow fescue sells at one-half to two-thirds the price of orchard-grass, while rye-grass ranges in price from one-third to one-half that of orchard-grass. The close similarity of the seed of these three grasses makes this a popular form of adulteration. But the fraud can easily be discovered under a lens. Meadow fescue seeds are larger than orchard-grass seed, straight and broadly lanced shaped and boat shaped. The seed of the English rye-grass is very similar to that of meadow fescue.

It will be money in the farmer's pocket to have his seed tested at the Kansas State Agricultural College.

CARE FOR BRAMBLE FRUITS.

A Few Valuable Tips on What to Do and How to Do It.

Among the bramble fruits the red raspberry is quite exacting as to climate. The dry air, in combination with low temperature, is likely to produce winter injury in Kansas when the thermometer drops to ten degrees below zero.

Red raspberry bushes should have the protection of a fence or windbreak. It is desirable, too, that the bushes hold all the snow possible. The retention of moisture is an all important point in growing bramble fruits. The fruit is borne on the canes of the preceding year. Canes that have borne fruit should be cut out and burned. This should be done as soon as possible after fruiting, as the old canes are likely to be affected with fungus and become a source of infection for the young canes.

A PAPER BY PRESIDENT WATERS.

New Officers, Also, for the Science Club in Its Last Meeting.

The Science Club met last Monday night in the Physical Science Hall. Dr. T. J. Headlee presided. The paper of the evening was by President Waters; it described his investigations on "The Influence of Maturity Upon the Yield, Digestibility and Palatability of Timothy."

These officers were elected: President, Henry Jackson Waters, *ex-officio*; vice-president, J. T. Willard; secretary, A. A. Potter; treasurer, Dr. Burton Rogers; members of executive committee, E. H. Webster and Dr. Headlee.

The club voted to have the regular meetings begin at 7:30 o'clock.

A Luncheon For Governor Stubbs.

Governor Stubbs and Mrs. Stubbs were the guests of honor last Saturday at a four-course luncheon in the Domestic Science building. The other guests were President Waters and Mrs. Waters, Mr. and Mrs. C. A. Kimball, Mr. and Mrs. E. B. Purcell, Mrs. Mary Van Zile and Miss Antonetta Becker.

Roses for the Winter.

The horticultural department has a bed of three hundred and fifty rose plants. There are four varieties: Richmond, Pearl in the Garden, Bride, and Bridesmaid. The roses are sold at one dollar a dozen.

A BIRD CASE REVERSED.

BLACKBIRD, JAY, CROW AND SPARROW SUCCESSFUL IN APPEAL.

Attorney Parker, for Defendants, Proves the Indictment of October 15 Was Faulty—A Notable Decision.

In the case of the State vs. Blackbird, Jay, Crow, and Sparrow, indicted at the present term for a series of alleged offenses contrary to law in such cases made and provided: The case reaches the reviewing authority on an appeal from the department of entomology. Defendants, by their counsel, J. B. Parker, assistant professor of entomology, friend of birds, enter formal denial to each and every allegation in the aforesaid indictment, heretofore printed in THE INDUSTRIALIST of October 15, and move that it be dismissed, quashed and otherwise made null and void, for these reasons, to wit, *i. e.*, and also, *viz*:

1. That the birds mentioned therein represent three, not four families. The crows and jays belong to the same family.

THEY'RE USEFUL BIRDS.

2. No more useful birds are known to the agriculturist than some of the sparrow and blackbird families.

3. That a family of birds should not be condemned because one or two members of it may be guilty of questionable conduct.

4. Defendant admits, for the jay, that this bird attacks and destroys the eggs and young of other useful birds and is, therefore, deservedly in disrepute. However, counsel avers that in its feeding habits the jay rarely proves harmful, although at times it will attack cherries and, in the cold weather, will even go to the corn-cribs for food.

BUT THE COWBIRD.

6. As to the blackbird: The important representatives of this family in Kansas are the cowbird, red-winged blackbird, crow blackbird or grackle, the orioles, and meadowlarks. Of all these the cowbird alone may profitably be destroyed. Counsel pleads that when judged by its feeding habits even this bird must be classed as beneficial. The small amount of grain it consumes is more than paid for by the number of harmful insects it destroys. But it has one extremely bad habit, because of which in counsel's judgment it merits extermination. It builds no nest but places its eggs in the nest of other and usually smaller birds, which are thus forced to rear its—the cowbird's—young at a sacrifice of an entire family of their own. Counsel never has seen more than one cowbird reared in any one nest, and this he says means that every cowbird, in all probability, represents the loss of a whole brood of another species, that might have been as useful as the one cowbird in destroying noxious insects.

THESE KILL MANY INSECTS.

7. That the red-winged and the crow blackbird, jointly accused of destroying corn and other grain, need not be executed; that the farmer can, without much trouble, protect his grain without said execution. The chief food of these birds is insects. The good service they give the farmer in this respect, counsel declares, entitles them to a far greater share of the grain than they are grudgingly permitted to have. The farmers of Kansas cannot afford to destroy these two species of blackbirds. Neither can they afford to destroy or permit anyone else to destroy or molest in any way the orioles and meadowlarks.

8. That the indictment of the defendant, sparrow, is faulty in that it neglects specifically to identify the bird. Said indictment, counsel declares, can be applied to only one species of the family and that one a foreigner: the

English sparrow. This bird is a nuisance. It lays a heavy tax upon the farmer's grain and makes small returns in the destruction of insects. Furthermore, it attacks and drives other more desirable birds away from the vicinity of houses and barns and, worst of all, it is foul and unsightly in its habits of nesting and roosting. Little can be urged in favor of the English sparrow. Its introduction into this country was a deplorable blunder. It should be destroyed.

This bird, however, must not be permitted to disgrace the whole sparrow family, represented in this state by more than fifty species, of which more than half are either permanent or summer residents. The farmer has no more loyal and helpful friends than are the native members of the sparrow family, and no case has ever been recorded where they have wrought damage to grain in any stage of its production.

9. That the person or persons that drew up the indictment didn't know much about birds, anyway.

Opinion.—The state erred in not specifying as to the sparrow to be executed and grievously offended the whole blackbird family that numbers within its circle the much loved meadowlark and the oriole. This must be true because Prof. Parker says so. The case is therefore reversed with costs.

PROTECT THE YOUNG ORCHARDS.

A Cover of Manure Should Be Applied to Save the Soil.

Young orchards should be prepared now for the coming of winter. The soil should be in good condition and free from weeds. As some good fruit soils will blow badly if not protected, a cover of manure or old straw or hay should be applied. This will prevent washing, blowing, or hard freezing. Soil protection, it should be borne in mind, is of as much importance or more than cultivation.

The danger of injury from rabbits must be guarded against. The trees should be wrapped with veneer tree wrappers or corn stalks. Either is as cheap and much more effective than any tree wash or paint. Any wash or paint loses its value when exposed to rain and snow and must be applied frequently. Field mice sometimes cause serious loss by girdling young trees near the ground. If the ground about the tree is bare there is little danger, but when a mulch has been applied they are likely to nest in it and live upon the bark of the young trees. Poisoned grain will kill many of them, but if this is used poultry must be kept out of the orchard.

JUDGING A HEREFORD HERD.

Boys From the Department of Animal Husbandry Visit Irving.

The stock judging team, accompanied by T. R. H. Wright and T. G. Patterson, assistant professors, went to Irving last Monday. The team went down to "work over" a part of the Hereford herd of Fred Cottrell.

Mr. Cottrell owns one of the largest Hereford herds in the state. He also has the largest round barn in this part of the country. The barn has a capacity of 500 tons of hay, 10,000 bushels of grain, and sufficient room in the basement for 300 head of cattle.

The Regents Were Dined.

The members of the board of regents were the guests of the domestic science department at luncheon Thursday and Friday. At eight o'clock Friday night the members of the board attended a reception in their honor in the Women's Gymnasium. The occasion was particularly for the regents to meet the new members of the faculty and the instructing force.

WHY YOUR BILLS GO UP.

FARMERS DON'T GET ALL THE MONEY, HENRY WALLACE SAYS.

City Folk Should Do Their Own Marketing—Anything to Eliminate the Middlemen Profit—Illuminating Advice From the Veteran Editor.

For the privilege of living in the city, you, Mr. City Man, are paying too much for the bread, the meat and the potatoes you use. But don't blame the farmer. You don't get off with paying a fair profit to the middlemen, who buy the products from the farmer and sell them to you. You pay one-third more, often from two to five times as much as the farmer receives.

This interesting information was part of an address before the last National Conservation Association meeting a while ago at St. Paul, by Henry Wallace, editor of *Wallace's Farmer*.

DO YOUR OWN BUYING.

"If the townsman is to live on his income," Mr. Wallace said, "he must get farm products from the farm to the kitchen door more cheaply. He must do the marketing himself rather than order by telephone, which adds 16 per cent to the cost of the purchase. He will have to be satisfied with less food that is out of season, travel stained, and gathered before its time."

Another thing that hasn't helped to reduce the prices, if Mr. Wallace knows what he is talking about: There are too many people in the city and not enough in the country. Too many eaters and too few producers. To grow enough farm products to meet the increasing demand Mr. Farmer has been mining his acres instead of farming them. He has been taking the stored fertility of his soil, the potash and nitrogen in the form of products, and has sold them or, rather, given them to the cities, without putting any fertility back on the land.

INTENSIVE FARMING THE HOPE.

"On the farmer's side," said Mr. Wallace, "we can add some food-producing acres, mainly by irrigation, a slow process, limited at best, and by drainage. Our main hope is by increasing the yields per acre. That means more intensive farming, by which we mean better cultivation, crop rotation, and live stock farming—intensive, yet diversified."

"Just here," he continued, "we are up against the real thing, for better farming means more labor. Skilled farm labor is not to be had in sufficient quantities either on the farm or in the home. The farmer can seldom use the city man even if he came from the farm in his boyhood. Methods have changed. He isn't experienced enough."

TOO MANY FAIRY TALES.

Mr. Wallace doesn't think the railroads are helping matters any by telling fairy tales to a land hungry people about the semi-arid lands of the West—fairy tales to the effect that cultivation increases the rainfall, the East is moving West, the desert is a myth, and even the Almighty has changed his plan of watering the earth, to enable railroads to sell their semi-arid lands.

"Yes," Mr. Wallace said, "we do excel the peasants of Russia and India in wheat growing. Nothing to brag about, though. On land that has been farmed 1,000 years England, France and Germany grow twice as much wheat to the acre as we do."

"If the city continues to rob the country," Mr. Wallace said, "of the best of its young people, it must eventually starve. Both city and country must do their share."

Usefulness is the rent we're asked to pay for room on earth.

THE KANSAS INDUSTRIALIST

Issued weekly during the college year by the Kansas State Agricultural College, Manhattan, Kansas.

PRES. H. J. WATERS Editor-in-chief
PROF. C. J. DILLON Managing Editor
DR. J. D. WALTERS Local Editor

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The typesetting and other mechanical work is by students in the school of printing, of which J. D. Rickman is superintendent. Both these departments are in Kedzie Hall.

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SATURDAY, NOVEMBER 12, 1910.

TO CONTROL PARALYSIS?

In an illuminating discussion of infantile paralysis, published this month in *The American Review of Reviews*, Dr. John B. Huber declares there is no reason in logic or in science why an immunizing and curative agent shall not, in very good time, be forthcoming to control this disease as smallpox is controlled. Dr. Huber does not doubt the infectious nature of acute anterior poliomyelitis—the scientific name for the disease that has brought sorrow to so many homes. The pathogenicity of the disease, he declares, is established, but remaining problems are to be elucidated, and for this purpose he makes a nation-wide appeal to physicians for assistance by sending post-mortem specimens of the spinal cord to the Rockefeller institute, New York, where Dr. Simon Flexner and his colleague, Dr. Paul A. Lewis, are conducting experiments of transcending importance. Dr. Huber's article should be read by every physician in Kansas.

Infantile paralysis is not a new disease and Kansas has not been alone in its suffering, as many persons suppose. The disease was epidemic in New Orleans in 1841 and again 30 years later. But up to 1907 such occurrences were rare in this country. Epidemics prevailed in Sweden in 1905, in Australia in 1903 and 1908, and extensively in Prussia in 1909. The disease has been wide-spread for several years in Scandinavia. In the last four years infantile paralysis has prevailed in the United States and, probably, few states have been wholly exempt. In New York City, in 1907, more than 2,500 cases were reported. It appeared in 136 cities and towns of Massachusetts. Indeed, the disease was almost world-wide that year, according to Dr. Flexner's investigations.

The census bureau in Washington reported recently that in 1909 there were reported 569 deaths from infantile paralysis in the United States and that of this number 552 were white persons and only 17 negroes. Kansas reported 57 cases and 15 deaths last July; but these figures, as the state authorities know, were far below the truth.

It is not the intention here to discuss the scientific aspects of a malady that has confused the best of the country's scientists. The purpose, indicated in the beginning, is to show that although the most powerful microscopes have not clearly disclosed the smallpox virus, that disease has, nevertheless, been almost wiped from the earth, and that, therefore, the same fine achievement may be expected as to infantile paralysis. And, further, that Kansas has by no means been the center of its devastation. It is comforting to know, too, that Dr. F. S. Schoenleber, professor of veterinary medicine in the Kansas State Agricultural College, is coöperating earnestly with Dr. Crumline, of the state board of health, and other scientific men in trying to discover if the disease originates in the lower animals, a problem still to be worked out in the interest of humanity.

Not long ago organized labor opposed trade schools and clung to the apprenticeship idea. Now the leading unions favor manual training. The demand for quick efficiency settled that question.

AS TO STUDENTS' READING.

One hundred and eighty-three magazines are received regularly in the college library. One hundred and fifty-two of these are scientific. Several hundred newspapers, daily and weekly, the best in the country, are on file there.

Ever read them? Ever look at any paper except the one from home? Ever write to the editor in your town and tell him about the things you see and learn in the big college the people have put here for you? Ever do this?

If you don't do these things you are neglecting a duty you owe yourself and the state. The editor of your home paper would be glad to print your letters if you were careful in preparing them.

You, and every student in the college, should be press agent for the institution in which you are getting your education. It ought to be a pleasure and, incidentally, the doing of it will enrich your vocabulary, make your name known and show the folks at home they are not wasting money on you and that you are observant and quick to learn. Every boy and girl in the Kansas State Agricultural College should be willing—and glad, too—to write interestingly of the college and its services.

Don't get into the habit of doing only what you are ordered to do. Don't keep your eyes everlastingly on the clock and your ears standing out to hear the bell that tells of dismissal. You can't "unionize" knowledge. You'll have to be like most politicians: receptive at all times, if you expect to get along in this world. And one of the best ways to get along is by reading good newspapers, good magazines, and good books—if it's only twenty minutes a day—because in this way you will know what is happening in the world and what people are doing and saying. If you never look at any paper except that on the wall you'll be in the class that men designate as "below the average." It may be "after hours" when opportunity knocks at your door and you'll be too slow in opening it.

SOME STUDENT EDITORIALS.

As to Cheating.

Cheating is a question that every student must decide for himself. No act of student council or of faculty can, of itself, abolish it. It is a question of individual honor, and until every student puts honor above grades cheating will continue.

Grades are not the sum and substance of college classes. A student gets as much good from a subject as he puts into his work, and a student who receives a grade he does not earn has not benefited himself. The student who goes away with a diploma won by cheating will never feel the fine sense of satisfaction that goes with the student who wins by hard work and honesty.

Better Houses Needed.

"When you can't get what you want, take what you can get," is a rule with which persons desiring to rent houses in Manhattan have had to comply. The demand for modern houses has been far greater than the supply, and as a result the real estate men have many dissatisfied customers. Along with this demand has come a steady increase in the price of property, until at present the price asked for a fairly good modern house is exorbitant.

A majority of the houses built in Manhattan in the last five years were built as a speculation. For this reason they are not the type of houses that make desirable homes.

At present there are two loan associations in Manhattan. With the aid of these associations a man with a few hundred dollars is enabled to build a house, paying for the same by monthly payments. In most cases it requires ten or eleven years to pay for such houses. Many persons are taking advantage of this means of obtaining homes, as it offers an excellent opportunity to invest savings.

What Manhattan needs is more houses and better houses, houses that will be attractive to the man wishing

a home. Until these are built the citizens and prospective citizens must content themselves with the present conditions.

The Junior Prom.

As arrangements are in progress for the christening function at the Nichols Gymnasium the subject of dancing has become the subject for discussion. The question as to the moral significance of the dance probably never will be answered to the satisfaction of every one. However, there are many kinds of dances, one of which is harmful. A dance such as the junior class proposes to give will consist of college people, which should be a sufficient guarantee of its propriety. The student body is especially well conducted. Dances in general should not be judged by the dances that are bad.

A junior prom is an entertainment given by the junior class of the colleges and universities, in honor of the senior class. The senior class does its part by putting on a senior farce. A dinner is then served and afterwards the floor is cleared and the dance begins.

The advent of the junior prom will stimulate a better form of social entertainment closer to the college. A large percentage of the students dance, but as this form of divertimento is frowned upon by certain members of the college faculty the dances are given down town. They should be college dances and given in college buildings.

The Rural Schools.

The great rush of young people from the farms to the city is a subject of much attention in many magazines and newspapers. The lure of the city is great—it is dazzling—and not only the farmer's boy but even the farmer's girl is becoming a prey to it. The farm, according to economists, is the food production center of the country—its scientific management is an absolute necessity to modern civilization.

The question is how to make the farm more attractive than the city. The *Interstate Schoolman* says: "As soon as the country girl gets a little education she wants to be off to work in the city. * * * Knowledge has made her restless." This is thought to be one of the chief reasons for the land slide from the farm—the educational system is at fault.

The current *Independent* has an article upon the subject of rural schools which may be enlarged upon here. The rural schoolhouse is in itself a shameful thing. It is unattractive and unhomelike and nearly always insanitary. Often its entire membership is below ten. The "little red schoolhouse" should follow the little red-topped boots.

More Kind Words From Friends.

"Good. You are doing finely."—C. A. Shamel, editor *Orange Judd publications*, Chicago.

Glad to note your success. The paper is fine. Send me a copy regularly.—C. E. Wantland, general land commissioner, *Union Pacific Railway*.

"We shall watch this with considerable interest, and hope its success will meet your greatest expectations."—Henry Wallace, *Wallace's Farmer*.

"I desire to congratulate you on the attractive character of the transformed INDUSTRIALIST. Please put me on the list."—H. L. Nicolet, financial editor of *The Kansas City Star*.

I have just been reading your new paper and I think it is excellent—interesting, and typographically a thing of beauty.—George B. Longan, city editor, *The Kansas City Star*.

"I wonder if it would be possible for you to send me THE INDUSTRIALIST regularly? It would be mighty valuable for me to have it."—J. C. Marquis, agricultural editor, *University of Wisconsin*, Madison.

I've just had a glimpse of your new paper and it looks mighty good. Typographically it could not be improved upon, and I judge from just glancing over it that in an editorial way it is just as good. If your pupils don't come out equipped with all that is nec-

essary in that line I can see where it is going to be entirely their fault.—H. F. Kohr, assistant telegraph editor, *The Kansas City Star*.

"The new KANSAS INDUSTRIALIST is a five-column folio, newspaper form. Except for the fact that it is printed on coated paper, it looks a good deal like a newspaper, and reads a lot more like one—a mighty good one. THE KANSAS INDUSTRIALIST will be sent to the newspapers of the state, and there isn't a newspaper in the state that can't find half a dozen interesting items to clip and reprint."—*Manhattan Mercury*.

This week we received the first number of THE KANSAS INDUSTRIALIST, which is the old Kansas Agricultural College magazine in a new form—a five-column quarto in newspaper style. The change marks the beginning of Prof. Dillon's work at the head of the department of industrial journalism of the college. The new form of the paper facilitates the handling of news in it, and the added facility shows plainly in the first number.—*The Breeders' Special*, Kansas City.

A Golden Text.

They shall hunger no more, neither thirst any more; neither shall the sun strike upon them, nor any heat; for the Lamb that is in the midst of the throne shall be their shepherd, and shall guide them unto fountains of waters of life: and God shall wipe away every tear from their eyes.—Rev. 7:16-17.

THE ROGERS PLAN IN BRIEF.

A Condensation By a Student Assigned to Reduce a Long Story.

Twenty students in the department of industrial journalism were assigned to write condensations of Dr. Burton R. Rogers' plan to eradicate animal tuberculosis. Dr. Rogers' story of this plan contains several thousand words. Here is the shortest return on the assignment. It was written by M. L. Laude. Dr. Rogers has had no chance to consider the condensation. The purpose was to test the students' powers of concentration, to tell much in little space, to get the point up near the top of the story. From the lay editor's viewpoint, Mr. Laude has succeeded.

Put a tag in the ear of every hog on the farm. On that tag put your name and address. This is the first part of a plan to rid the nation of the "Great White Plague." The object of the tag is to enable the government, through its meat inspectors at the packing-houses, to discover the districts where tuberculosis exists.

The second part of the plan is to buy up all animals infected with tuberculosis. The fund for this purpose could be furnished by the government, charitable institutions, and the packing-houses.

Dr. Burton R. Rogers, instructor of anatomy in the Kansas State Agricultural College, the originator of this plan, says that were it put into practice all animal tuberculosis would be eradicated within two years. This would lead to the eradication of all human tuberculosis resulting from tuberculosis in the lower animals.

Putting aside the question of human tuberculosis, the eradication of animal tuberculosis would more than pay the expense it would necessitate.

Prof. McKeever Goes East.

William A. McKeever, professor of philosophy in the Kansas State Agricultural College, left Manhattan Wednesday night for Indianapolis, where he will address the Annual Juvenile Court Conference of the middle western states, on the "Rural Environment of the Young." He will also address a mass meeting in Indianapolis on "Cigarette Boys and Other Delinquents." Prof. McKeever is the author of six or seven little books on intensely interesting subjects, mostly concerning boys and girls and their training.

Be content with your condition or else improve it.—*Fra Elbertus*.

Lonesome.

The Call of the Wild, the Call of the Town, The Call of the Sun-kissed Plain: I've felt them all in by-gone years With pleasure—and some with pain. I've known the Call of the Mountains high, And the Call of the Sounding Sea: But here it's the call of the

Curfew— Whistle— Calling— Me—

All sorts of calls I've had, but there, I Shouldn't be telling you this: Calls from nagging collectors and Others I'd gladly miss. But here, at night, when the clock strikes nine I'm lonesome as I can be, And I hark for the sound of the

Curfew— Whistle— Calling— Me—

"Hoarse and insistent" that whistle blew In the city beside the Kaw, And good little children hastened to bed In keeping with rules and law. Every man in the town would look To see if his watch was right When the "raucous" voice of the

Curfew— Whistle— Blew at— Night—

* * * * * Down in the street a church bell rings, But never it gives the cheer That came when the whistle blew at nine: The call I'd like to hear. Memories of days in foreign ports, and Stormy nights at sea, all fade In the wish to go where I know the

Curfew— Whistle— Calling— Me—

SUNFLOWERS.

He that would understand a painting must give himself to it.—*Ruskin*.

A man must be clean in private life as well as in public life.—*President Waters*.

It's as important to have well-bred people as it is to have well-bred cattle.—*Stubbs*.

The curse of the liquor traffic is worse than was the curse of slavery.—*Governor Stubbs*.

Oysters and pickles as "royal entertainment" is the latest achievement of a suburban exclusive set.

"Popular Young People Marry" is a head-line in the *Larned Tiller and Toiler*. Wonderful, wonder-ful.

It was recorded in 1860 that in the 40 years then ended 5,062,414 emigrants had entered the United States.

The year 1610 was "starving time" in Virginia—300 years ago. Of 500 colonists all except 60 perished within six months.

There has been more purifying of public life in the last ten years than in the previous fifty; and Kansas has led in the cleaning.—*President Waters*.

And now comes word that cheese—Camembert—is to cost forty cents a pound, an increase of five cents. Everything's going up, these days, even aeroplanes.

The most useless men on this earth are those that sit in front of grocery stores and whistle and chew tobacco and curse the weather and the state of the union.—*Stubbs*.

Children were not leaving the farms in 1810, and farming was somewhat more difficult than now. The third census, recorded that year, gave the population as 7,239,814.

Compensation is to be found in almost everything. For instance: A lot of faces that never will be seen again have disappeared from the country weeklies. Election is over.

If the faculty members still need conviction with respect to mid-term examinations, they can hear of something to their advantage by questioning any student who received a yellow envelope this week.

Mr. Ow lives in El Dorado. He may think he takes the prize, but there is Mr. Ek of McPherson, points out the *Hutchinson News*. It may interest these men of little name to know that Mr. Ong lives in Kansas City and Mr. Ike and Mr. Aye in Manhattan.

The recent order of the utilities commission re-routing the street-cars in Kansas City is certain to injure the business of the sight-seeing companies. No one should pay a dollar for that service when the best part of the city is to be seen for five cents. Take the Independence car. They are to run south from Ninth to Woodland to Tenth; west on Tenth to McGee; south to Fifteenth; west to Grand; north to Tenth; east to Woodland; north to Ninth, and so on east to Independence.

ALUMNI NOTES.

Mrs. Katherine (Winter) Hawks, '01, of Chanute, Kansas, is visiting her parents in Manhattan.

F. J. Harbiger, '99, gave a talk on "Soil Fertility" at the farmers' institute at Lyons, Kansas.

Mrs. Emma (Haines) Bowen, '67, is visiting her daughter, May (Bowen) Schoonover, '96, at Marietta, Ohio.

A. J. Conover, '98, a dairyman with the state board of agriculture of North Carolina, was a campus visitor recently.

James Trumbull, '96, of Dimmit, Texas, has been visiting his sister, Miss Mary Copley, of the college executive force.

R. A. Oakley, '03, assistant agrostologist in the department of agriculture at Washington, visited the college last Saturday.

Mattie Kirk, '10, sent \$5 for the athletic field fund. Miss Kirk is spending the winter at her home in Bazaar, Kansas.

H. N. Vinall, '03, who is doing field work for the department of agriculture, sent in \$15 from Washington, D. C., for the athletic field.

The Webb brothers, '04, attended the farmers' institutes at Clearwater and Conway Springs. They are both farming in that vicinity.

A recent card from Louis B. Bender, '04, shows he is at Fort Andrews, Massachusetts. He is a second lieutenant in the coast artillery.

A. H. Leidigh, '02, who is farming near Hutchinson, assisted in a recent institute schedule, talking on "Corn Breeding and Soil Fertility."

L. O. Tippin, '10, is installing machinery for the Western Electric Company of Chicago. He has been working at Aurora, Illinois, the last week.

F. A. Kiene, '06, attended the Adams-Rannells wedding Wednesday. Mr. Kiene is now with the Ft. Scott Sorghum and Syrup Company, of Ft. Scott, Kansas.

L. A. Fitz, '02, of the department of milling industry, will leave for Washington, D. C., this week, to attend the meeting of milling industry experts and the association of official agricultural chemists.

Ernest L. Adams, '07, visited friends in town last week. Mr. Adams is spending the winter in Washington, D. C., in the interests of his work in grain investigations in the United States department of agriculture.

G. H. Failyer, '77, for many years professor of chemistry in the college and now scientist in the bureau of soils, Washington, D. C., has been elected president of the Washington division of the American Chemical Society.

Jim Richards, '09, who will be remembered as an end on the '08 football team, was in the city last week. Jim is now traveling in Missouri and Iowa for the Hoffman Milling Company, of Enterprise, Kansas.—*Students' Herald*.

Mrs. May (Willard) Enrick, '95, who, with her four children, has been visiting in Kansas, Missouri and Illinois since July, has returned to her home in Portland, Oregon. While visiting in Missouri all of the children except one contracted typhoid, from which they have just recovered.

H. C. Rushmore, '79, traveling salesman for the Norvell-Shapleigh Hardware Company, St. Louis, Missouri, visited the college last week. He sat on the rostrum with the professors and was very much impressed with the large attendance of students at chapel. Mr. Rushmore is one of the most loyal alumni, being one of the directors of the Alumni Association.

Changes of address: Earl J. Evans, '06, 3901 Broadway, Kansas City, Missouri; W. H. Phipps, '95, 2412 Benton Boulevard, Kansas City, Missouri; Ethel E. Berry, '07, Ladies' Hall, Purdue University, West Lafayette, Indiana; Edith B. Justin, '08, 1212 Fremont Street, Manhattan, Kansas; A. C. Peck, 431 Alison Street, Los Angeles, California; Minnie Romick, '94, 1557 American Avenue,

Long Beach, California; Agnes (Romick) Edgar, '93, Yolo, Yolo County, California; Howard M. Chandler, Manhattan, Kansas; E. A. Wright, '06, 549 64th Avenue, West Allis, Wisconsin; Henry M. Thomas, '98, 1616 West Sixth Street, Racine, Wisconsin.

LOCAL NOTES.

Custodian Lewis went to Blue Rapids last Tuesday.

Cyrus Anderson, a former student here, visited college this week.

The Eurodelphians will entertain the Websters at the Women's Gymnasium to-night.

Dr. T. J. Headlee and family have moved to their new home southwest of the college.

Marie Delfs, a former student, attended a recent meeting of the farmers' institute at Inman, Kansas.

Leonard M. Peairs, instructor in entomology, who was ill with typhoid, has returned to his college work.

Miss Lynne Sanborn, Miss Wilma Orem, and Miss Gladys Nichols, all of the 1910 class, visited college friends recently.

The new bulletin-boards are now ready to use. They have been placed in the main hall in the administration building.

The Rev. Charles F. Dole, of Boston, Massachusetts, was the speaker in student assembly Wednesday. His subject was: Simple Honesty.

The departments of milling industry and agronomy will have a joint exhibit at Chicago November 19 to December 3 at the Tribune Land Show. Mr. Fitz will have personal charge of the exhibits.

Rees W. Hillis, who has been working for the entomology department near Fort Scott, has returned and will take out a senior assignment after mid-term. Mr. Hillis has been spraying apple orchards.

E. H. Webster, director of the experiment station, went to Washington, D. C., to-day, and will attend the annual convention of the Association of American Agricultural Colleges and Experiment Stations.

The usual "mid-term squeeze" occurred last Tuesday morning. Every one was eager to see if he had any extra mail and the narrow hall was crowded beyond the limit. No one was injured, but some were slightly bruised.

B. L. Hughes, of Howard, Kansas, visited the college last Saturday. Mr. Hughes is a former student of Otawa University. He is contemplating entering the Kansas State Agricultural College and taking the course in architecture.

President Waters will discuss entrance requirements to the college courses at the annual meeting of the Association of the American Agricultural Colleges and Experiment Stations, to convene next week in Washington, D. C.

Laurence Brink, a former student here, a graduate of the University of Rochester, was married last summer to Miss Grace Eccles, of Seattle, Washington. Mr. Brink has charge of the English department in one of the high schools of McKeesport, Pennsylvania. He is a son of C. M. Brink, dean of the college.

Raymond G. Taylor has begun his duties as instructor in history and civics at the Kansas State Agricultural College. Illness prevented Mr. Taylor from being present at the beginning of the fall term. He was principal of the Hiawatha High School last year. William Orr, '10, has been teaching Mr. Taylor's classes.

James W. Searson, associate professor of English, cast his vote at Lincoln, Nebraska. While there he attended a meeting of the Pawnee County Teachers' Association. Mrs. Searson and little girl returned with him. They will reside at 815 Fremont Street, in the home formerly occupied by T. J. Headlee, professor of entomology and zoölogy.

WHAT THE SOIL NEEDS.

MORE GOOD TIPS ON FERTILIZERS BY THE CHEMISTRY DEPARTMENT.

You Can't Grow Alfalfa Forever, the Latest Bulletin Says, Because This and Clover Rob the Soil of Mineral Substances.

It is a widely spread error to suppose that the growing of clover or alfalfa on land is a general fertilizer for it. These crops add to the stock of nitrogenous compounds, but they diminish the stock of mineral substances.

Only a few years ago the average farmer knew little or nothing about the soil he cultivated. In fact, many then, as now, mined their farms. Not two in ten knew the word humus or ever had heard of nitrogen or phosphoric acid or potassium or any of the important elements that constitute the basis of fertility.

Nowadays it's different. Farmers have ceased to ridicule "book farming." They know, usually, what is meant by worn-out soil. Still there are some that need help and advice. In the matter of fertilizers, for instance: The bulletin recently issued from the chemistry department of the Kansas State Agricultural College says tests have shown how little use it is to apply mineral fertilizers to wheat when the soil is inadequately supplied with nitrogen. This element is stored in soils in the organic matter, and from this soluble compounds are slowly produced. Kansas farms have, in the older parts, been robbed of this organic matter, and it is probable that the soil nitrogen is at present the limiting factor in grain production.

WHY LEGUMES ARE USED.

It must not be at once concluded that if nitrogen be lacking the farmer should buy nitrogenous fertilizers. The chief natural source of nitrogen has been the leguminous plants. For countless centuries the wild plants of this order, including peas, beans and clovers, were growing on the prairies, and with the coöperation of microscopic organisms growing on their roots accumulated the nitrogen that Kansas farmers have been exploiting. The farmer must learn a lesson from nature and repair the damage to his soil by cultivating alfalfa, clovers, etc., and seeing that the nitrogen they accumulate gets back to the soil. Considerable amounts will be in the roots and stubble, but much more is in the leaves and stems. If these be sold from the farm as hay, the land not only gets no benefit from the nitrogen contained in it, but it is further impoverished by the loss of potassium, phosphorus, calcium, and other elements taken up by the plants and contained in the hay.

STERILITY SURE TO COME.

Permanent maintenance of fertility demands that the animal excretions produced when the farm crops are fed be returned to the land. In so far as this is not done the soil must depend on the disintegration of mineral constituents, and in many cases these are so limited in amount that sterility is only a question of time.

In respect to the total amount of nitrogen required, the corn crop makes heavier demands than the wheat crop. It can, however, flourish with less available nitrogen in the soil in the spring, as its period of growth extends over a longer time and there is opportunity to produce nitrates from the organic matter of the soil during the summer months.

COLONEL TRUE WAS HERE.

The Campus Considered as a Site for the Harris Memorial Monument.

Colonel J. F. True, of Topeka, chairman of the Harris memorial committee and president of the Kansas Improved Live Stock Association, was at the college last week. Colonel True desired to look at the college campus with a view to forming an opinion as to its availability as a site for the Harris memorial, should it finally be decided to place it here. The committee, of which Colonel True is chairman, has been called to meet one day during the International Live

Stock Exposition in Chicago late this month, when most of the largest contributors and members of the committee will be present.

Colonel True's committee will turn over the fund with its choice of a site to a final committee, the membership of which has been suggested to include W. R. Nelson, of *The Kansas City Star*, Gov. W. R. Stubbs, Alvin H. Sanders, of the *Breeders' Gazette*, Chicago, B. O. Cowan, president of the American Shorthorn Breeders' Association, and H. J. Waters, president of the Kansas State Agricultural College. This committee will finally decide where the memorial is to be erected.

THE WEEKLY MENU.

How To Feed Four Persons Three Times For \$1.25.

What will it cost? That's what interests every one. Here are three meals, suggested by the department of domestic science, that can be served to four persons for \$1.25. This cost is figured on the basis of butter at 35 cents a pound; cheese, 20 cents; eggs, 32 cents a dozen; milk, 8 cents a quart; and fish, 18 cents a pound. Use is also to be made of left-overs, or "reviews," and only enough material to be employed for a generous serving:

BREAKFAST		
Hominy	Bananas	Cream
Popovers	Coffee	Scrambled Eggs
DINNER		
Peanut Soup	Toast Sticks	
Steamed White Fish	Egg Sauce	
	Olive Oil Pickles	
Mashed Potatoes	Creamed Carrots	
Bread	Butter	
Vanilla Sponge	Chocolate Sauce	
	Coffee	
SUPPER		
Fish Croquettes	Tomato Sauce	
	Macaroni with Cheese	
	Potato, Onion, and Celery Salad	
Sponge Cake	Lemon Gelatin	
	Tea	

JOHN GINGERY A VISITOR.

The Old Left Tackle Is a Government Sheep Inspector Now.

John Gingery, '10, returned from Carizozo, New Mexico, last Saturday. He has been a government sheep inspector in New Mexico since his graduation. Gingery captained the football team last year and made a brilliant record at left tackle. Already he has heard the voice of the fans asking him to come out and hold down his old job for the last three games of the season. He has replied that he isn't needed, admitting at the same time that he should like to get into the game again.

The Apple Judging Class.

J. C. Cunningham, assistant in horticulture, accompanied the apple judging team to Council Bluffs, Iowa, Thursday, where the team will judge apples at the National Horticulture Congress for a cup offered by the *Twentieth Century Farmer*. The team last year lost to Nebraska by one and one-half points, but the boys hope to do better this year. The team was chosen by averaging the class grades and the grades received in the preliminaries held last Tuesday and Wednesday. C. V. Holsinger, lecturer on horticulture for the extension department, acting as judge. The competition for places on the team was close, two men tying for fifth place until five o'clock Wednesday afternoon. The grading is done by allowing 50 points for placing the apple, 10 points for identification, and 40 points for reasons for such classification. The men on the team were Ralph Caldwell, Stanley Clark, Donald Jones, Irving Root, and Edwin Fuller. The team will return to-day.

Those Bulletin-Boards.

Just a word about the new bulletin-boards. Where is the place for "Lost—Found—For Sale" ads? So many of these notices are posted that nothing smaller than a barn door will hold them. A board about the size of the usual list of examination questions, posted in Anderson Hall, would be useful as well as ornamental.

TOO FEW FARM GARDENS.

POTATOES, ESPECIALLY, ARE NEGLECTED BY MANY FARMERS.

Some Important Information Showing How to Treat the Seed Is Supplied by the Horticultural Department of the College.

Nearly every one with a garden and certainly every one with a farms should know how to grow potatoes, and they should know how to grow them properly. One of the absurdities of rural life just now is the evident determination of many farmers to neglect vegetables. More farmers buy vegetables, and particularly potatoes, year after year than many persons suppose, a readjustment of the old phrase "carrying coals to Newcastle."

Interesting experiments in potato growing were conducted last summer by the horticultural department of the Kansas State Agricultural College. This work was done by Jules C. Cunningham, who combines with skill in horticulture the ability to write interestingly and entertainingly of what he does and hopes to do. Recently he conducted an experiment to test the value of seed treatment so that the quality might be improved and the yield increased. A report of this work shows that it pays to treat perfectly clean seed if it is to be planted in old ground.

That it pays nearly 400 per cent to treat seed that is home grown, carelessly stored, and unselected.

That the ratio of culled potatoes to marketable potatoes is, in nearly every case, higher in treated seed than untreated seed, even when there is no increase in the total yield.

That if ground is to be used for a succession of years as potato ground the treatment of seed will prevent the ground becoming infested with the spores of potato diseases.

HOW TO MAKE THE "DOPE."

The solution used by Mr. Cunningham in treating seed potatoes was 1 pint of formaldehyde to 30 gallons of water. The seed potatoes should be put whole in a sack and suspended in this solution for two hours. Then spread them out to dry and cut and plant.

Corrosive sublimate may be used in the same way. Dissolve 10 ounces of sublimate in 5 gallons of hot water. Allow this to stand for 24 hours. Dilute to 30 gallons and suspend the seed in the solution for one and one-half hours. The utmost care should be taken when using corrosive sublimate, as it is a deadly poison and corrodes any metal with which it comes in contact.

For large quantities disinfecting may be done with gas. Put the seed in slat crates in a dark room. To every 1,000 cubic feet of space use 23 ounces of permanganate of potash. Put this in a wide shallow dish and pour 48 ounces of 40 per cent formaldehyde over it. Stir slightly and quickly leave the room. If you don't leave the room quickly you won't leave at all—alive. The doors and windows should be sealed over night.

LABOR SAVING DEVICES.

The treating of seed with either of the foregoing solutions may be hastened by simple mechanical devices. Put the seed into an ordinary wire picking crate and suspend in the tank containing the liquid. The crate may be lifted out and the potatoes changed as often as desired. Another way is to arrange barrels on a platform like stair steps and fill the topmost barrels with potatoes and the liquid. When the potatoes in this barrel are disinfected the liquid may be allowed to flow into the barrel below. Don't put treated potatoes into receptacles that held old or untreated potatoes.

Two More Happy Souls.

Ernest L. Adams, '07, and Miss Lu-lu Mahala Rannells, '07, were married last Wednesday morning at the home of Mr. and Mrs. H. B. Rannells on North Fifth Street by the Rev. D. H. Fisher. Mr. Adams is employed in the United States department of agriculture at Washington, D. C.

DOING THEIR FULL DUTY.

LAND-GRANT COLLEGES, IT IS SHOWN, KEEP THEIR PROMISES.

A Surprisingly Large Increase in Agricultural Students and Also in Domestic Science—Figures That Are Sure to Convince the Critics.

Are agricultural colleges doing the great work assigned them in the "land-grant" act? What are they doing for agriculture? These questions are answered convincingly and interestingly in an article by Dr. J. D. Walters, associate editor of THE KANSAS INDUSTRIALIST.

The following facts from the official report of 1909 of the U. S. Commissioner of Education and the records of the Kansas State Agricultural College, will throw some light on the character and tendencies of the work of the so-called land-grant institutions of America. These technical schools were founded and endowed by congress 47 years ago to teach "such branches of learning as are related to agriculture and the mechanic arts, in such a manner as the legislatures of the states may prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life."

There has been never-ending discussion as to whether the 68 institutions organized under this act are doing the special work for which they were intended, or whether they are drifting away from their evident purpose to imitate or duplicate the old-line universities.

WHAT THE FIGURES SHOW.

The total number of students enrolled in all departments of these institutions for the year ended June 30, 1909, was 72,885—an increase of 4,026, or 5.8 per cent, over the number for the preceding year. Of the total number, 6,766 were in attendance at the 16 separate institutions for negro students.

Omitting those in attendance at the negro schools, all of which are in the South and are almost purely agricultural, there were in the college departments of the agricultural and mechanical colleges 28,717 students, an increase of 1,744, or of 6.47 per cent, over the number for 1908. The short and special courses enumerate 11,203 students, an increase of 2,455, or of 28 per cent, and the preparatory departments 6,907 students, an increase of 386, or of 5.3 per cent.

The large increase in the number of students in the short and special courses is due chiefly to the number of practical courses, varying from one week to three years in length, offered in agriculture and related subjects. There were five institutions giving three-year courses; 24 giving two-year courses; five giving one-year courses; 16 giving eleven-week courses; 20 giving five- to ten-week courses; and 14 giving one- to four-week courses. Only eight of the 52 institutions did not offer one or more short, practical courses. The Kansas State Agricultural College gave in that year four short courses and is offering seven courses for the next year.

IN 52 COLLEGES.

For the purpose of comparison the whole student body of the 52 colleges described may be divided into three groups, namely, those studying agriculture and closely related branches, those studying engineering and related branches, and those taking general science courses not closely related to either agriculture or mechanic arts.

1. The number of students in the regular four-year courses enrolled in courses related to agriculture was: Agriculture, 4,855; horticulture, 605; forestry, 198; veterinary science, 215; household economy, 1,443; total, 7,316.

2. The number enrolled in regular four-year courses in engineering and related subjects was: Mechanical engineering, 4,389; civil engineering, 4,967; electrical engineering, 3,845; mining engineering, 1,293; chemical engineering, 498; sanitary engineering, 129; textile engineering, 102; general engineering, including students not yet

classified, 1,622; architecture, 599; total, 17,435.

3. The number of students in regular four-year courses in general science was 2,947; in applied chemistry, 698; and in pharmacy, 183; total, 3,828.

TO TEACH AGRICULTURE.

If an effort were made to reduce these three groups, inclusive of the negro students, into two great divisions it probably would be proper to add the first two courses of the third group to agriculture and the third course in the same group to the mechanic arts. The fact is that the general science students with few exceptions are studying agricultural branches to prepare themselves to teach agriculture, or the basic sciences of agriculture, in colleges or in the many secondary schools; or they belong to western colleges where the courses have not been segregated and where agriculture is the only vocational work taught. The 698 students of applied chemistry are to a good extent engaged in the study of agricultural chemistry, soils, etc. Such a classification will then give a surprising constellation; that is, almost an equation.

Agriculture and related subjects, 17,037 students. Mechanic arts and related subjects, 17,618 students.

THE GROWTH OF AGRICULTURE.

To show the tendencies of the growth of the different groups, the number of white students enrolled in agriculture, domestic science, mechanic arts, short and special courses, etc., as heretofore classified for the last five years, is shown in this table. (The negro schools are excluded from these statements.):

COURSES.	1905.	1906.	1907.	1908.	1909.
Agriculture.....	2,473	2,963	3,390	4,566	5,873
Domestic Science.....	717	833	1,030	1,319	1,443
Mechanic Arts.....	13,000	13,937	15,896	17,411	17,435
Special & Short Courses.....	5,658	6,420	7,776	9,060	11,203
Totals.....	21,848	24,153	27,632	32,356	35,954

This table shows there has been an increase in four years of 14,106 full four-year course students. That is an average annual increase of 3,521. The students in agriculture increased nearly 100 per cent and the students in domestic science over 150 per cent, while the students in the mechanic arts courses increased only about 37 per cent. Whatever may have been the cause or causes of this relatively rapid growth of the agriculture and domestic science courses, the presented facts are generally accepted with much satisfaction all over the country.

In the Kansas State Agricultural College this tendency has been especially strong, as may be read from this table giving the number of graduates in the different courses. The figures cover a period of eleven years; that is, they reach back to the time when the first mechanic arts course was organized—that of mechanical engineering:

COLLEGE YEAR ENDING:	Men.		Women.		Totals.
	Agriculture.	Mechanic Arts.	General Science.	Domestic Science.	
1900.....	3	18	16	10	58
1901.....	11	19	18	12	60
1902.....	15	17	14	14	59
1903.....	23	23	20	13	55
1904.....	23	23	20	6	30
1905.....	29	20	15	1	42
1906.....	20	27	16	7	26
1907.....	32	35	6	33	118
1908.....	21	31	9	46	113
1909.....	35	29	11	45	125
1910.....	39	36	10	51	141
Totals.....	248	224	151	82	322

This table shows, first, that in the eleven years covered by it 570 students have been graduated in the departments of agriculture and domestic science and only 457 in all other courses added together; second, that the number of young men graduated by the college has increased much more rapidly than the number of young women; third, that the number of students taking the general science course is constantly and rapidly decreasing; fourth, that in only two years out of eleven the number of graduates from the engineering courses was greater than the number graduating from the agricultural courses; fifth, that the increase in the domestic science course has been by far the most rapid,

amounting to over 500 per cent in eleven years.

ADVANTAGE WITH FARM BOY.

If all the students above the freshmen year, that is, the year when the courses begin to specialize, could be considered, the figures would be still more in favor of the agricultural group. The student of mechanics generally finds that to get a position in a large shop or industrial plant he must take the whole course, while the student of agriculture can stop at any time and go back to his paternal farm where no one will seriously inquire whether he has a college diploma or not. The causes that may induce a young farmer, from 17 to 21 years old, to abandon a college course are legion and of all possible kinds. The majority is purely imaginary, but they are sufficient to deplete the ranks of the classes every term.

SHORT COURSES POPULAR.

As has been stated, the Kansas Agricultural College has also established several short courses in agriculture, dairying, and domestic science. The following table, covering the past eleven years, will show the growth and fluctuations of this part of our college work. The dates give the year of the College catalogue in which the students are enumerated:

SHORT COURSES.	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	Total
Farmers.....	47	109	125	123	122	99	118	179	173	197	124	1416
Dairy.....	57	72	66	38	16	24	28	23	26	18	111	479
Dairy Manufacture.....	—	—	—	—	—	—	—	—	—	—	—	4
Domestic Science.....	24	47	41	63	51	88	92	134	188	168	152	1048
Apprentice.....	50	79	87	72	12	—	—	—	—	—	—	378
Totals.....	178	307	319	296	201	211	238	336	397	383	391	3325

These figures are large and they tell of an enormous amount of very effective, educational work with young men and young women almost exclusively from the farm. The courses they received covered instruction periods of from 11 weeks to twice that time (apprentices 11 months), and no educational seed fell here among thorns or upon barren ground. It all went right back to the prairies of Kansas and took root there. Many of these students, too, after taking a term in a short course, had developed their appetite for a more extensive knowledge and training to such an extent that they became regular students.

The land-grant colleges are evidently the schools of the people. They are not drifting away from their intended purpose. They are typical of the common sense way in which America is solving the difficult problems of higher, technical education. Agriculture is not being neglected by them, as some critics are constantly asserting.

MICKEL IS COMING BACK.

A Letter From a K. S. A. C. Young Man Now in Decatur, Illinois.

Armed with the experience gathered from several summer vacations spent on his father's newspaper; the acquaintance formed with news while on the staff of *The Students' Herald*; and the knowledge of journalism gained in the class room during his college career, Louis B. Mickel, a graduate of the school of printing, class of '10, went to Decatur, Illinois, September 1, to work on *The Herald*, a morning newspaper.

In a letter, "Mick," as he was known among his classmates, says: "I am to be promoted, November 1, from the job of local reporter to that of sporting editor. This is the first word I have had from the boss since I went to work, and it is certainly good news to me."

As most of the sport "dope" in *The Decatur Herald* comes in on the wire, with the exception of the athletic news of Milligan University at Decatur, his work will be mostly editing.

Commenting upon conditions in the city in which he works, Mr. Mickel writes:

"Plenty of saloons here. Lots of divorces. This place is a railroad town, not very far from a mining district, and these elements make all kinds of news."

Mr. Mickel is to return to Kansas the first of the year, presumably to take advanced work in industrial journalism at the Kansas State Agricultural College.

WHO'S WHO IN COLLEGE SPORT.

An Unprejudiced Account of the Weekly Athletic Activities of the Students.

The hope of an all-victorious Kansas Aggie football team has disappeared for this year. The Colorado Tigers took care of that last Saturday when they managed to gather in the sheaves from the football field at Colorado Springs to the extent of 15 points. The best the Aggies could do was to harvest 8 points while this was going on. The altitude of 5,500 feet undoubtedly had something to do with the score, but the players seem to be pretty well agreed on the fact that the eleven men that battled for the Coloradoans had a good big share in it. Captain Vandermoer and Bower, the Tigers' scrappy right tackle, played an especially strong game, Bower's defensive work being largely responsible for keeping down the Aggie score.

The Aggies got a good start, following up Towler's return of the kick-off with a series of whirlwind plays that sent Roots across the Tigers' goal in three minutes play. The ball was in Colorado territory the larger part of the first two periods, except when a pretty forward pass

years. Missouri Valley requires that participants must be doing passing work in a full assignment; Topeka Conference, passing work in 12 hours.

Missouri Valley does not allow summer ball playing; Topeka Conference allows it.

Missouri Valley forbids training tables; Topeka Conference does not.

A glance through the rules shows that the college is taking a long step. But it is a step in the right direction.

FAKES AND FORMATIONS.

The annual football dinner at Nebraska University will be given December 3.

Nebraska won last Saturday from Kansas. *The Daily Nebraskan* celebrated the victory by putting out a pink sporting edition. If the Cornhuskers can dispose of the Iowa Aggies they will have practically a clear title to the Missouri Valley Conference championship.

One of the scrubs that is making good is a tall, rather lanky youth named Prather. He has been playing tackle, and showed up well in the Soldier game. King shifted him to half-back, Wednesday night, where he tore good-sized holes in the first team line. He already knows the game fairly well and should be a good running mate next year for Holmes.

THE MEDAL IS FOWLER'S.

The Third Race, Last Saturday, Disposed of the Hamilton Trophy.

The Hamilton Medal this year goes to "Shorty," otherwise I. Loren Fowler. The third race, run last Saturday, went to H. P. Wood, with Detwiler second and Fowler third.

This medal is offered every year by J. O. Hamilton, professor of physics, to the man making the best record in three cross-country runs. The contestants are graded according to place at the finish, 1, 2, 3, etc. The man having the lowest number when his grades for the three runs are added up wins. The medal was anybody's this year until the last race was over.

Detwiler won the first by a good margin, with Fowler, Stark and Wood following in the order named. Detwiler lost his chance for the medal on the second race, when he dropped to fourth. Fowler won this, Stark second, and Wood third. The result was that Fowler had only to come in third to win in the final.

The final scores were: Fowler 6, Detwiler 7, Wood 8, and Stark 9. The races were the closest contested for several years, but the time was slower.

FOR THE FIELD \$737.40.

Since October 13 the Contributions Have Amounted to \$60.

President Waters reports the total cash contributions to the fund for the construction of the new athletic field last Thursday, November 10, at \$737.40. The cash amounts received since October 13 are:

L. C. Aicher, '10.....	\$25.00
Mattie Kirk, '10.....	5.00
H. N. Vinal, '03.....	15.00
Ada Rice, '05.....	5.00
A. G. Phillips, '07.....	5.00
Frank C. Harris, '08.....	5.00

Two of these contributors, Mr. Phillips and Mr. Harris, have sent contributions of \$5 for the second time.

KINZER IS HUNTING CALVES.

A Car-Load May Be Sent Here From a Ranch in New Mexico.

R. J. Kinzer, professor of animal husbandry, is touring New Mexico on a calf buying expedition. Professor Kinzer desires to ship back to Kansas a car-load of choice calves and make show stock of them. He thought he could buy a large part of his car-load at the big Todd ranch.

This car-load of calves may be fed by the animal husbandry department, but it is more probable that some stockman will take care of them for the college.

THE KANSAS INDUSTRIALIST

Volume 37

Kansas State Agricultural College, Manhattan, Saturday, November 19, 1910

Number 8

COLLEGE STILL GROWS.

TWO MORE BUILDINGS TO BE ASKED FOR NEXT YEAR.

After Several Days Work the Regents Decided to Ask the Legislature for Approximately \$550,000 a Year for the Next Two Years.

Farming and everything pertaining thereto that is practical and practicable and of clear, common-sense value to Kansas are down for vigorous development in the state agricultural college in the next two years. The program and the appropriation the next legislature will be asked to vote were made this week by the board of regents and the president, Henry J. Waters. The period referred to as two years is from July, 1911, to July, 1913. For the first year of that time the board has asked for a maintenance fund of \$200,000 and for the second \$220,000.

From this fund, it should be understood, comes all salaries and expenses of every kind connected with administration—clerks, postage, transportation and so on. The proportionate increase in this fund is less than in former years and is regarded as conservative and as the smallest amount upon which the agricultural college can operate without crippling its efficiency. The maintenance of the college, the regents and the president declare—and the cost per student—is very much lower in the Kansas State Agricultural College than in any of its size and quality in the country. And this, notwithstanding the fact that industrial education is the most expensive education possible to devise. It takes more for equipment, for instance, for animal husbandry or mechanical engineering than was required to build and equip an old-fashioned college of respectable size.

TWO BUILDINGS NEEDED.

Two buildings will be asked for. One, the wing of an agricultural building, to cost \$125,000. This, under the plan of apportionment, would be divided into two payments, \$50,000 and \$75,000, respectively, in the two years. The amount would cover building and equipment. The new structure is intended to contain the live stock judging pavilion, and laboratory for instruction in the cutting and curing of meats, corn and grain judging pavilion, and class rooms in animal husbandry. It is the plan to ask the legislature at some future time for another wing in which to put dairy manufactures, cheese curing, etc., and at a still more remote period for a central structure between the two wings, to cost about the same as the wings, for farm crops, soils, and farm machinery.

CLASSES OUT DOORS.

When finished, 10 or 12 years from now, this agricultural building will be the largest on the campus, the central feature of the college, among the best in the country devoted to that branch of science, and certainly the equal of any. At present, the classes in stock judging and the laboratory work with farm machinery have no home. They do their work out doors and consequently in bad weather can receive no instruction. At present, practically the smallest building on the campus is the agricultural building, a strange anomaly in this sort of a school. This is because the agricultural building was one of the first erected here, in a day when the enrollment was only 400 students instead of 2400 as it is now. The institution and its activities have outgrown the present structure, as indeed it has outgrown nearly every building it has. When the new building is completed, the old building can still be used for class rooms and laboratories. The agricultural college is very badly overcrowded. Students are taught in

basements, attics, out of doors, and after dark. Formerly, the college had sessions five days in the week; of late years the enrollment has been so large that it has become necessary to run six days in the week so that all students might receive instruction.

A PHYSICS BUILDING, TOO.

The board is to ask for a physics building to accommodate the departments of physics and electrical engineering, now quartered in the general science building. This equipment will cost \$90,000. Physics, it should be understood, is the foundation story for the study of agriculture, especially in soils and crops, and is of course fundamental to all engineering work and of much importance to the work in domestic science. The proposed building is as much to accommodate the department of chemistry, which also now in the general science building, and has at present more than 1,000 students cooped in class rooms and laboratories impossible to ventilate with this number of students. The course in chemistry is necessary in the study of agriculture, because it enters into the composition of soils, feeding of animals, and the proper conduct of dairying, and is of inestimable importance in the study of human nutrition in domestic science. These two buildings would relieve the present congested condition of the college and permit classes to come out of the attics and badly lighted basements, unless it transpires that the enrollment increases while the buildings are in the process of construction. The total request to the legislature for 1911-'12 is \$550,900 and for 1912-'13 \$555,900.

The requests from the heads of departments showed to the board of regents that they could use to good advantage much larger amounts than the board could consistently request. The board itself would have liked to see larger amounts for the departments, especially for the experiment station at Manhattan and the experiment station at Hays, for the farmers' institute work, for the department of heat and power, for equipment for shops and laboratories.

WHAT THE INTERNATIONAL IS.

A Liberal Education for Breeders or Farmers, Says President Waters.

From Coleman's Rural World:

H. J. Waters, president of the Kansas State Agricultural College, on a recent occasion expressed himself as follows: The International Live Stock Exposition, which will be held this year from November 26 to December 3, is the court of last resort in all matters pertaining to the improvement of live stock. It is the place where all controversies regarding superior merit are settled for the year, and as such contributes more to livestock improvement than any other single agency in America. As an object lesson, it is unequaled on the continent. As a means of awakening interest in improved live stock, it and similar shows are indispensable. It is a liberal education in live stock production for any farmer, breeder or student to attend the International.

IMPROVED COOKING FOR WICHITA.

The K. S. A. C. Domestic Science Course to be Taught in That City.

Domestic science, as it is taught in the Kansas State Agricultural College, is to be introduced into the high school of Wichita. Miss Ida E. Rigney, in charge of cooking and sewing in the high school, has asked J. D. Rickman, superintendent of the school of printing, for an estimate covering the cost of printing the outline book prepared by Mrs. Mary P. Van Zile, dean of women. She desires, she says, to put Mrs. Van Zile's entire course, if possible, into her department.

SHOP WORK THE BOYS DO

A COURSE OF 268 HOURS COVERING THE IMPORTANT SUBJECTS.

Machinists Are Not Long Idle When They Leave College—Anyway Its Fine to Know How to Fix Things on the Farm.

You can't make a machinist in thirty days, nor can you become one in that time if you start with no knowledge of the lathe. The instructors at the Kansas State Agricultural College know this. Into the 268 hours of machine shop practice required of mechanical engineers, they have crowded the most important instruction. As a result, the man that leaves the institution at the end of a four-years' course has a fair knowledge of metal working machinery and a thorough knowledge of the time element in contracting machine work.

The shops at the college are equipped to handle the average run of shop work. Machines are being made continually and the students do the work. The castings are made in the foundry. The patterns come from the woodworking department. A blacksmith shop equipped with 35 forges rounds some of the smaller pieces into shape and furnishes properly tempered and sharpened tools for all of the workmen.

Among all of its graduates, the college numbers few that are following the machinist's trade. They were not fitted for it. They were educated for the machine design room and as a consequence those that are now in the shop are preparing themselves for the larger end.

An apprentice course is offered to a limited number of young men that have sufficient reason for taking it. They receive small pay and carry few studies. Many graduates go to other institutions as instructors. Some work with farming implement houses, and this is not to be wondered at when they were educated in the same institution as the agronomist. The course is efficient and the graduates are not long in finding remunerative work.

WOE FOR THE QUAILS.

The Season Opened Last Tuesday With a Loud Noise.

The quail season is open. Until December 15 anyone with a license may go in search of the little brown birds. The license costs \$1. Get it from the county clerk and save trouble.

Quail shooting is a sport that calls for a quickness of eye and finger equaled only by wild duck hunting. It takes an old hand at the game to do quick and accurate shooting when a covey flies up almost under a man's nose. The novice will fire wildly into the air, unless his gun is pointing downward when he is startled, and then nine times in ten the earth gets it.

There is an exhilaration and tonic in the sport that thrills even the veteran, when a good shot is made.

At this season the "call of the wild" comes to every one that ever held a gun in his hands. The instinct to get out into the open, in old clothes, with your old corn-cob pipe and a good dog is almost irresistible.

THE BRIGHT SIDE OF IT.

A Student's First Contribution to the Literature of Horticulture.

A member of the class of industrial journalism, recently enrolled, was assigned to write about the care of orchards. The returns indicate that the student has a cheerful view of a prosaic subject, to say the least. Here is the story, untouched by the editor:

As in all else, caring for an orchard has undergone its share of scientific scrutiny. The fuzzy worm, that once pursued its tranquil course in undisturbed contentment, is now rudely

driven from its home by the merciless spray. The farmer is no longer content with the simple remedy of first catching the worm and then of squeezing out its life between two wooden blocks—effective as the process doubtless was.

But the spray is not the only aid to the productivity of an orchard; cleanliness must also be invoked. The soil of an orchard should be kept absolutely free from debris of any sort, as this is often the breeding ground for field mice and harmful insects. Again, the soil ought to be carefully weeded and no growth of any sort save that of the trees themselves tolerated. Healthy fruit can not be expected where the sustenance of the soil is filched by the aggressive weed.

Most fruit growers undoubtedly know this, and yet—well, look into your own orchard and see if it isn't time to clean house.

Notice to Editors.

Beginning with the edition of November 26, THE KANSAS INDUSTRIALIST will be mailed in envelopes similar to those used when the paper was printed in pamphlet form. This will be continued for the present. In order that life may lose none of its sunshine, the editors of the country who have generously quoted from its columns are notified of the change. Watch for the flat envelope.

MULCH THE STRAWBERRIES.

By December 1 the Ground Should Be Covered With Straw.

Strawberries should be mulched for the winter. This will prevent the frequent freezing and thawing. Coarse hay and straw is good mulch material. Fine material will become too compact and exclude air, causing the plants to sweat in the spring. It would be an excellent plan to let the poultry work in the straw for the grain and weed seed before spreading on the bed. The mulch should be applied by December 1, or earlier if the ground is becoming dry. A mulch of loose straw three or four inches deep should be sufficient unless the straw is very coarse, in which case more may be used.

With the coming of spring the bed should be examined occasionally, and when growth begins part of the mulch should be taken off the row. This may be placed in a windrow between the rows of plants. It can then be used to re-cover the rows in case of frost after the plants are in bloom.

President Hamilton Spoke.

J. M. Hamilton, president of the Montana Agricultural College, was a speaker in student assembly Saturday morning. Five members of the faculty of the Montana Agricultural College are graduates of the Kansas State Agricultural College. Following Mr. Hamilton's talk, J. W. Lawrence, dean of engineering in the Colorado State Agricultural College, spoke. Dean Lawrence has been visiting many of the large colleges of the country. He assured the students that no Western boy or girl need go East for his education.

A Dress Parade Tryout.

The first dress parade of the year was held Thursday. It was a preliminary exercise, as some of the uniforms have not arrived. A dress parade may be held Wednesday, the day before Thanksgiving, if the uniforms arrive in time.

A Visitor from Arizona.

Frederick W. Wilson, '05, animal husbandman and superintendent of the experiment station farm of the University of Arizona at Phoenix, arrived in Manhattan to-day for a short visit. Prof. Wilson is on his way to the International at Chicago.

ACRE YIELD TOO SMALL?

THE PROPER USE OF FERTILIZERS WILL CORRECT THE FAULT.

A Bulletin from the Department of Chemistry Describes the Importance of Supplying Lime in Soil Used for Alfalfa.

When farmers realize how important it is to put something into the soil from which, for years, they have taken so much the problem of how to increase the acre yield will be far toward settlement. Some men get head over heels in alfalfa and forget in their eagerness that the day of reckoning must come. Alfalfa, like cowpeas and beans and clover, is independent in the matter of nitrogen, but it doesn't make its own mineral fertilizer. Calcium or lime compounds are of great importance to these legumes. The question is treated at length in a valuable bulletin issued, recently, from the department of chemistry in the Kansas State Agricultural College.

No crop removes so much lime from the soil as does alfalfa. In soils not amply provided through limestone or gypsum with an abundance of calcium, the application of these substances to alfalfa and clover may be of vital importance. In this connection it may be borne in mind that superphosphate is a calcium compound, so that when it is applied to land a double fertilizing function is performed.

SLAKED LIME IS NEEDED.

For the purpose of adding calcium, slaked lime, air-slaked lime, ground gypsum or ground limestone may be used. If lime is added it will be somewhat caustic at first and may act upon organic matter and possibly mineral matter, but in a short time it will be transformed to calcium carbonate, the chief constituent of limestone.

The ash of potatoes is rich in potassium, and in fertilizing this crop this should be borne in mind and a preponderance of that element provided in the fertilizer applied. Similar fertilizing is applicable for other garden crops. As the profit in truck gardening lies largely in the production of early and succulent vegetation, there is in this state probably no line of farming in which commercial fertilizers can be more profitably employed.

CARE AS TO FRUIT TREES.

As light sandy soil supplies the texture needed to produce such crops most easily, it is also most likely to be in need of additional fertility, as such soils are liable to be deficient in soluble substances and nitrogen.

In the manuring of fruit trees and orchards it must be borne in mind that too liberal a supply of fertilizer is liable to result in the production of wood rather than fruit. For nursery stock this would be no disadvantage, provided that the growth produced is not so rank as to produce soft, imperfectly matured wood. With fruiting orchards, mineral fertilizers are often of great assistance, but an excess of nitrogen should be avoided.

A Reading Club Organized.

A reading club was organized last Sunday at the home of H. F. Roberts, professor of botany. The club is made up of a few congenial intellects with a liking for the best things in literature. It will meet at 4 o'clock every Sunday afternoon at Prof. Roberts' home or some other designated place. Any person interested in the books and subjects discussed may become a member.

President Waters in Washington.

President Waters left Saturday night for Washington. He spoke, one day this week, in the convention of agricultural college workers.

THE KANSAS INDUSTRIALIST

Issued weekly during the college year by the Kansas State Agricultural College, Manhattan, Kansas.

PRES. H. J. WATERS Editor-in-chief
PROF. C. J. DILLON Managing Editor
DR. J. D. WALTERS Local Editor

Except for contributions from officers of the college or members of the faculty, the articles in *THE KANSAS INDUSTRIALIST* are written by students in the department of industrial journalism, under the direction of Prof. Charles Dillon.

The typesetting and other mechanical work is by students in the school of printing, of which J. D. Rickman is superintendent. Both these departments are in Kedzie Hall.

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SATURDAY, NOVEMBER 19, 1910.

THANKFUL OR HUNGRY?

The first Thanksgiving in this country was in 1621 when the Plymouth Colony thanked God for the bountiful harvest. It was genuine, that thanksgiving, it came from the heart as it did two years later when rain followed a long drouth. And just to show how thankful they were the colonists ate much.

In thousands of homes, next Thursday, in every part of the nation, men and women—and, of course, the children—will gorge themselves. In some of these homes a few words will be said to show that the diners really are thankful to the Almighty for the things they have; but not in many, it is feared, will heads be bowed in humble gratefulness for the blessings of the year.

It is a strange and interesting thing that whenever men celebrate they eat. It doesn't matter whether it be a grass-girdled savage outside the city limits of Suva or within the sacred precincts of Westminster—if there are any precincts there—the archbishop of Canterbury or the Boss of the First Ward in Kansas City—like they eat to prove their gratitude. Just why the unhappy turkey was chosen to be the victim of this annual attack upon the digestive tract is of no consequence here. The point is that once a year the gobbler is gobbled with every gustatory accompaniment within the people's means, and some that are not.

For one hundred and twenty-one years this strange disturbance has been officially anticipated in every state in the governors' proclamation. And for 121 years it has been followed by Dr. Somebody's tablets and a grouch. A great newspaper, in Chicago, works itself into a frenzy every Fourth of July because four or five thousand misguided idiots blow off their fingers or their faces to show their patriotism; but none, save only the doctors and the sufferers, knows how many lives are eaten out—or shall it be said "cramped out?"—as the result of too much turkey and the absurd cranberry sauce which, for no known reason, has been present since the beginning of the annual turkey autopsies.

Congress had no such intent. Its resolution required the President to recommend, publicly, that upon a certain day the people should return thanks in the churches for the year's bounties. George Washington published his first proclamation October 3, 1789, and set Thursday, November 27, as the day of prayer. He didn't say a word about meals. Not a word about turkey or celery. But with a singular unanimity, that could rise only from hearts and minds controlled by primitive instincts, the people laid violent hands upon the turkeys of the land and smote them neck and thigh. It was then and there that the great national phrase was originated: "Which do you prefer—light or dark?"

And they've been smiting ever since. They'll be at it again Thursday. Probably a thousand boys and girls will go home from this big college for the usual feast—the turkey and sauce and the biscuits and mashed potatoes and pumpkin pie and—possibly—a tiny strip or two of bacon, though this is much to expect in 1910.

Mother will fuss around and try to do all the work and let everyone have a real rest—that's the way all good mothers do—and father, like's not, may set aside his grievances for a day. And they'll eat and eat till the cows come home. But are they thankful, or just hungry?

"TWERE VAIN TO HOPE."

The remarkable decline in prices, over which some exceptionally imaginative press agent in the East is exercising himself and the country, this week, has not manifested its beneficent presence in Manhattan. The "bursting bins of corn and oats," to which the cheerful Secretary Wilson attributes the reduction in the cost of living, are bursting here, as in every part of smiling Kansas. But everyday mortals, born of woman and put into the world to hustle for the price, reck not of oats or corn in their daily marketing, and bacon—for which all men sigh since it is 45 cents a pound, sliced—is as much beyond their reach now as when corn and oats were higher than they are.

As to meat prices, particularly, the rumor that they are lower is here authoritatively and finally denied. Pork chops, for instance, cost five cents apiece in Manhattan. One stingy, little chop, two-thirds bone and one-third fat, served with resentment and reluctance to a hungry school-boy or a weary father or mother is a mighty dinky meal. Potatoes worth anyone's attention were quoted, yesterday, at \$1.10 a bushel, and the basket had a tapering bottom. However, a slight reduction has, it is true, been noted in some brands of laundry soap and in wire nails. Bromo selzer, too, is obtainable in some stores for five cents the drink, so life still is worth living.

THE COLLEGE'S FINE RECORD.

"An institution that can do as much good work as has the Kansas State Agricultural College," says the *Farmers' Review*, of Chicago, in its latest issue, "is to be congratulated."

This tribute from one of the oldest and most influential farm publications in the country is worth the serious consideration of every man and woman in Kansas. The editorial grew from the announcement that the department of animal husbandry had been conducted for a year with a profit, without touching its appropriation. Yet this department was obliged to do all its stock judging in classes out of doors, and in inclement weather it could do none.

The department of animal husbandry had something it could sell—live stock; several other departments, cramped into ily-ventilated basements or attics, with sessions six days a week and at night, have only future citizens and future wives and homemakers to offer the state as profits for the year's work.

Are not these worth while? Aren't these boys and girls deserving of the best equipped study houses in the country? Isn't it a fine thing to see the influence of the state's big agricultural college growing until its fame is known from Maine to California and from the Gulf to the Northern boundary, and beyond? Isn't it something to know that the state's standard of farming, its standard of rural life, its home economics—and its live stock—are as high as those of any state in the Union? Isn't that worth while?

FROM AN ALUMNUS OF '79.

Some Much-Valued Encouragement from H. C. Rushmore, of Kansas City.

To *The Kansas Industrialist*.—I saw the first copy of the *INDUSTRIALIST* ever printed. That was 35 years ago, and very few numbers in all these years have missed me. I wish it were possible to show the rickety building, just south of the main entrance of the old Bluemont College, in which the *INDUSTRIALIST* was born.

It was the mouthpiece of the "up-heaval" in the new industrial education, and to-day it is a better and greater exponent of the advanced ideas than were the early issues the exponent of the then ideas. I am proud of the fact that

every alumnus in the United States has for years past received, without charge, the weekly issues of the paper, directly by my own initiative, through President Nichols and the board of regents.

The paper in its present form is a thing of beauty, delightfully refreshing, of great interest, instructive, practical, constructive, and a regular "peach."

I have read every line in it since its new form, and know that you will proceed along broader lines to make it the greatest exponent of the greatest school now claiming the attention of educators, as well as some of us needing education. Permit me sincerely to congratulate you.

H. C. RUSHMORE.

A Golden Text.

Offer unto God thanksgiving; and pay thy vows unto the Most High.—50th Psalm, 14.

Out of the Ordinary.

From *The Farmers' Review*, Chicago.

The department of animal husbandry at the Kansas State Agricultural College is reported to be not only paying its way, but actually returning enough profit to more than meet the salaries of the teaching force connected with it. Such a record is considerably out of the ordinary. Usually the finances of a college department tend decidedly in the opposite direction. If they come near breaking even, say nothing about the expense incurred in instruction, such a department is generally considered as doing exceedingly well. A state educational institution is not supposed to make money. Funds are appropriated that it may exert its efforts educationally rather than financially. The work of an animal husbandry department is of a demonstrative character and much of it cannot be expected to be anywhere near self-supporting. The fact that good returns can be made in the management of a breeding herd or a feeding experiment speaks well for those in charge. In some instances this can be accomplished, but in others it is an impossibility. The office of a college or experiment station is to teach what not to do as well as what to do. Ofttimes results which accompany the application of a wrong method serve as more powerful lessons than a mere demonstration of correct practice. In such case financial returns cannot be considered. An institution that can accomplish as much good work as has the Kansas State Agricultural College, and include an animal husbandry department of such worth as that headed by Prof. Kinzer, which pays its way, is to be congratulated. The record reflects great credit upon the business management of the department. It illustrates how real profits may be made out of live stock despite the handicaps common to work of this kind at a college. Animals on the farm are not required to provide salaries for professors. Where expenses are less the profits ought to be more—provided, of course, the farmer exhibits the same quality of gray matter in their management.

KNOW THE COLLEGE LIBRARY?

Here's a Concisely Prepared Guide Explaining the Arrangements.

The stack room in the college library has 19 two-story racks running north and south, nine on the north and ten on the south, and seven running east and west, making 26 in all. The numbering of the books begins with the rack near the door between the stack room and the reading rooms and runs to the east end. Then coming back, beginning with number 10, on the south side. The numbering is continued at the south side of the west racks, running to the north side of the library.

The books are divided into 10 main classes, which are subdivided according to the Dewey decimal system of classification—a standard method used in many libraries. Class 000 contains general works, as the leading magazines, bibliography, indexes, etc., and can be found in racks 1, 2, 3, and

the west side of 4. Class 100 includes works on philosophy, ethics, psychology, etc., and is in the east side of rack 4. In class 200 are books on religion, church history, and other similar works. Students wanting these books will find them in the east half of rack 4, in rack 5, and the west side of rack 19.

Class 300 is a large one, containing books on sociology, economics and education, and occupies racks 5, 6, 7, 8, 9, and part of 19. The Kansas laws and court reports, college theses and books on commerce are also in this class. Class 400, containing books on the study of languages, is found in the east side of racks 9 and 10. The books on natural science, racks 10 and 11, physics and electricity, rack 12, chemistry, rack 13, biology and botany, rack 14, and entomology, rack 15, are found in class 500.

Class 600 contains the works on useful arts, such as veterinary science, engineering, agriculture, horticulture and forestry, and occupies racks 15, 16, 17, and 18. Rack 19 has a collection of odds and ends of several classes. You now go to the south rack on the west side of the room, which contains class 700. Here are books on fine arts, as domestic science, architecture, etc. Class 800 is in the next rack, number 21. Both English and German literature will be found here. The remaining racks contain class 900, or history, travel, and the like.

In the second story on the north side will be found the U. S. Senate and House of Representatives reports and documents. In the east racks on the south side are the agricultural reports, both state and United States. Some books on the agricultural experiment stations will be found in racks 23 and 24 on the west side. The west racks on the south side contain all the leading farm magazines.

In the west racks, other than the agricultural books, are some German magazines. Many of the books in this story are unclassified or at least are not numbered.

Several small special reference libraries will be found in the reading rooms: history on the south wall of the east reading room, sociology and philosophy on the east wall, engineering on the north, and domestic science on the west. On the east wall of the large reading room there is a special English library. The encyclopedias are in the northwest corner of this room and near them are the late magazines and daily papers. The country newspapers will be found in the southeast corner.

The library is fully indexed. The subject index is on the east side of the little room east of the stack room. The title and department library indexes are on the north side of the door on the west side of the same room, while the author and shelf list indexes are on the south side of the door. There is also an index for the publications of the United States department of agriculture in the west end of the stack room. Besides these, the standard published indexes are on the shelves or one of the librarians' desks.

A Speaker from Cornell.

The Science Club was entertained last Monday night with a lecture by H. S. Jacoby, professor of bridge engineering at Cornell University. The speaker dealt with the modern tendencies in bridge design in this country and emphasized the importance of theoretical investigation in important engineering problems. His address tended to dignify technical education and the engineering profession. The lecture room was filled to its capacity with members of the club and visitors.

The Downfall of Tweed.

Boss Tweed was convicted thirty-seven years ago to-day in New York on 204 counts charging grafting. This was the people's first big victory. The latest was—however, this paper does not discuss politics.

The leader of the orchestra is always a man who has played second fiddle.—*Fra Elbertus*.

A Song of Thanksgiving.

There's a purple light on the rugged hills. There's a song of winds in the leaf-blown trees.

And sweet, ah, sweet through the country-side The wild winds croon of Thanksgiving-tide. Speed on, O winds, to the busy town. Speed on, again, to the farthest sea. And flow into song waves—chanting clear. "The time of Thanksgiving draweth near."

There's a light of stars in the purple skies. There's a song of waves on the sandy shores. And soft and sweet where the foam-flecks ride.

The lithe waves sing of Thanksgiving-tide. Shine out, kind stars, on our absent ones. And murmur, waves, to the listening shores. And flow into song-tides—chanting clear. "The time of Thanksgiving draweth near."

—Helen Chase.

SUNFLOWERS.

Too many rural schools are suffering with arrested development.

Another thing for which to be thankful: the papers will resume the printing of news.

Respectfully referred to the majority of the county court in Kansas City: Isaiah 57:4.

A man drops a big job for a little one when he neglects himself to reform others.

The student that does only what he's assigned to do won't startle the world with his successes.

Why should a man kill a doctor who has maltreated him? Why not let him worry to death over the bill?

With the election settled the country papers will now resume the printing of personals—instead of personalities.

Don't be afraid to kick up a little dust as you pass along. It's better to have dust on your trousers than fringe.

F. D. Coburn's fame is complete. An Eastern magazine has referred to him as "of the Kansas State Agricultural College."

Suggestion for the season: Colorado College should be thankful its football game was not played on the Manhattan grounds.

Some farmers can see another 80 acres and a riding plow, but they're stone-blind when their wives are carrying in water from the well.

Never do anything without knowing why you do it. Don't be backward about asking questions. You'll never know too much about anything.

Don't get so wrapped up in your own little, dinky work that you can't see anyone else's. The chances are that someone is doing something worth while.

A recent number of the *Literary Digest* refers in a highly complimentary way to the Kansas State Agricultural College special trains that take education to the farmer.

The report of the Interstate Commerce Commission shows that the railroads killed 3,804 persons and injured 82,374 in the year ended June 30, 1910. And not one, probably, had a pass.

The delightful informality of the Manhattan street-car system would be refreshing to a Kansas City man now. Not only can you smoke; you can take a book and writing materials and enjoy yourself.

"We're out of debt!" is the ill-timed boast of many counties, "and our taxes are the lowest." Whenever you hear this yawp you'll find poor roads and poorhouses instead of modern county hospitals.

As was to be expected, "the weed" at last broke into *The Kansas City Star's* discussion of the "no smoking" order, a few days ago. And "weed" is mighty near right in referring to most of the smoke in the street-cars.

Something should be done to limit the output of this Mason person—\$5,000 a year, count it—in Emporia, the "Fat Peril," William Allen White calls him. Isn't there a union of some kind to control this sort of thing?

With 5,861 railroad collisions recorded in a year, the thought comes that the best safety device was that used in England when motor-cars were introduced. A man was sent ahead to warn persons of the car's approach. While haste is much desired nowadays the railroads should remember every passenger's first hope is to reach his destination in one piece, standing—not in a box.

LOCAL NOTES.

Louis Sikes, a former student, visited college Monday.

The carnations in the west greenhouse have begun to bloom.

The Ionians are to entertain the Hamiltons at the Women's Gymnasium to-night.

Madame E. Jeanne D'Arman played two piano solos in student assembly Tuesday morning.

The architectural department has temporarily moved to the southwest room in the basement of the Main hall.

The plumbing installation in the engineering building is at a standstill on account of delay in the shipment of steam valves.

Thanksgiving vacation will be from Thursday, November 24, to the following Monday. College will be in session again that day.

The Ionian Society held its meeting last Tuesday afternoon instead of Saturday so that its members could attend the football game.

D. F. Rose, assistant in seed control, will soon issue a report on testing of seed germination for the fiscal year ended June 30, 1910.

Edwin Holton, professor of rural education in the extension department, is visiting the high schools of Jackson County, this week.

Miss Lillie Hall and Miss Helen McClanahan, teachers in the city schools, are taking special work Saturdays in music and drawing at the college.

The German club gave its first program last Monday night. The club has recently been organized. Its purpose is to instruct as well as to entertain.

Those that attended student assembly Wednesday enjoyed hearing of sports in German universities, described by J. Z. Cortelyou, professor of German.

P. E. Crabtree, Miss Frances L. Brown, and H. B. Walker, of the institute department, are holding meetings in Ottawa, Garnett and Columbus this week.

Frank Harris has charge of the classes in clay modeling this term. The classes are modeling architectural details, decorative statuary, and various historic ornaments.

C. V. Holsinger, of the institute department, Dr. K. W. Stouder, of the veterinary department, have been holding meetings in Osborne and Mitchell Counties this week.

Dr. J. D. Walters has been assembling his classes in the southwest basement room of the main building on account of lack of heat at his new quarters in the engineering building.

The seed house is being filled rapidly this week. The Kafir-corn was threshed and several varieties of field corn were shucked. This seed will be cleaned and sold to farmers over the state.

J. W. Searson, associate professor of English, an exceptionally pleasing speaker, will lead the Y. W. C. A. services the night of December 1. His subject is to be "The College Girl's Duty to Her College."

Mrs. Mary Van Zile, dean of home economics and professor of domestic science, and Miss Ula M. Dow, assistant professor of domestic science, spent Wednesday and Thursday visiting the Pittsburg Normal School.

The apple judging team returned Monday from Council Bluffs, Iowa. While it did not rank first as a team, Ralph Caldwell took first honors as the best individual judge. The Iowa team was first, Nebraska second, and Kansas third.

The college sent a delegation to the convention of Y. W. C. A. cabinet members at Topeka, last week. Mrs. J. E. Manley, of Topeka, Mrs. Lester McLain, of Denver, secretary for this district, and Miss Flora Miller, national secretary, were speakers. The Kansas State Agricultural College delegation included Gladys Seaton, Flora Hull, Pearl Smith, Clara Kiewer, Flora Morton, Winona Miller, Bertha Phillips, and Neva Colville.

W. S. Gearhart, G. S. Hine, and Miss M. Josephine Edwards, of the farmers' institute department, were in Blue Rapids holding an institute Monday and Tuesday. They went to Frankfort for Friday and Saturday.

A ditch is being dug between the mechanical engineering building and the gas building, west of the engineering building, in which will be placed the steam pipes. At present these pipes run outside the ground and are out of commission in exceptionally cold weather.

J. H. Miller, superintendent of the farmers' institute and college extension department, left last Saturday for Washington, D. C. Mr. Miller will attend the convention of farmers' institute superintendents Monday, Tuesday, and Wednesday. Thursday and Friday the agricultural college extension workers will meet.

Ray Stomps, a student in the Kansas State Agricultural College last year, has written from Amsterdam, Holland. Mr. Stomps will be in school again after Christmas. He earned the money for his journey to Holland by working in the Kansas harvest fields. When he first came to this country, a few years ago, he knew no English. He expects to graduate from the Kansas State Agricultural College.

ALUMNI NOTES.

C. H. Withington, '06, writes from 921 West Tenth Street, Topeka.

Miss Odell Wilson, '08, is principal of the high school at Bluff City, Kansas.

Edouard House, '02, can be found at 424 North Sixteenth Street, Kansas City, Kansas.

Mrs. Carrie (Painter) Demarias, '99, is practicing domestic science in a new home in Mulvane.

The present address of H. A. Spuhler, '06, is 6014 East Fourteenth Street, Kansas City, Missouri.

Howard Bayles, '09, who was graduated in the veterinary science course, is now practicing at Randolph, Kansas.

W. J. King, '09, has recently taken the position of superintendent of industries of the state reformatory at Hutchinson.

Walter T. Scholz, '07, captain and full-back of the 1905 football team, viewed the Fairmount game from the side-lines. Mr. Scholz is manager of the Frankfort, Kansas, telephone company.

F. E. Hodgson, '05, is prospering in the implement and coal business at Little River, Kansas. His brother, Ned Hodgson, '03, is a successful farmer and orchardist in the same vicinity.

M. H. Chandler, '03, who has had work in Porto Rico, the Hawaiian Islands and Mexico, has returned to the Kansas State Agricultural College. He will be in the department of experimental engineering.

Harley J. Bower, '10, has been elected assistant in soils in the Iowa State Agricultural College. He also is enrolled as a graduate student. Before going to Iowa Mr. Bower spent some time in plant breeding work in the Illinois State Agricultural College.

Miss Grace Berry, '10, is in charge of an excellently equipped department of domestic science and art in Nicksen, Kansas. She says the work is very popular with the girls. Her department received a prize for school display at the Hutchinson fair last fall.

W. L. Hall, '98, assistant forester in the government forest service, is the author of a bulletin recently published on "Surface Conditions in Stream Flow." Mr. Hall is now at Madison, Wisconsin, where he has charge of the new forest laboratory at the state university.

C. S. Dearborn, '04, R. T. Chalender, '08, and A. A. Perrine, '09, are members of the faculty of the Montana State Agricultural College. W. W. Carlson, '08, of the Kansas State Agricultural College, formerly was a member of the faculty of the Montana State Agricultural College.

GROW YOUR OWN SEED.

AN ACRE, HAND-SELECTED WHEAT, WOULD SAVE YOU MONEY.

Every Farmer Should Have a Plot, Well Protected, and with its Product Increase His Yield—the College Will Help You.

Why buy your seed wheat?

Why not have one acre set aside expressly to grow your own pure seed, just as it is grown at the college? You can do it; some farmers are doing it now, and not only do they save money but they add to their income by selling seed to others less provident. One acre will produce enough seed the first year to plant from 20 to 40 acres. Why not use the money you save from seed—use it for betterments, a place to shelter your machinery or to buy a water system for the house?

The seed acre should be in the middle of the field to protect it from vermin or any other influence that might damage it. A bushel of pure seed should be purchased from the college or some reliable seed house or be taken by hand selection from the general crop on the farm. A bushel can be obtained by hand selection in less than a day. Prepare the seed-bed thoroughly, plant the seed and take good care of the ground after planting. Soil tillage and management could be experimented with along with the test for pure seed. See if harrowing the seed-bed after planting does any good. Find out the best time and the best way to plant. But this is as far as the experimenting should be conducted by the average farmer. If he believes he has something good let the state experiment station trace it out and find its good and bad qualities.

Too many farmers are averaging 13 bushels of wheat an acre, the same as their neighbors; that is good enough for them. If a farmer gets 25 bushels an acre, his neighbors call him "lucky" or say his farm is more fertile than theirs.

Farmers should realize that they can make as much money on 40 acres producing 20 bushels as they can on 80 acres producing 13 bushels. It is true that within the last few years many farmers in Kansas have planted better, but few raise their own pure seed.

Test the different varieties, select one that is noted for its milling quality, if you are growing pure wheat. Find out which kind grows best in your locality with your experimental acre and average 20 or 30 bushels an acre every year. You can do it.

A KNOCK ON RATS.

Mr. Turk Says They Destroy More Grain Than All the Birds.

To The Kansas Industrialist.—Let the birds alone and turn your batteries on rats. They destroy more grain in one year than all the birds do in ten years. This is my opinion after eighty-one years of observation and practical farming.—A. D. Turk, Wellington, Kansas.

PLANNING A FEAST IN MUSIC.

Prof. Valley's Forces Are Working for the Annual Festival.

The department of music is planning a larger festival than that given last June. Rehearsals began two weeks ago. Prof. Olof Valley expects to have chorus practice every Monday night until commencement. A large number was present at the first rehearsal. A chorus of one hundred voices is now assured.

The college orchestra, assisted by the glee club and other vocal talent to be engaged later, will give a matinee concert. R. H. Brown, director of the orchestra, has not made any definite program yet for this event, but has been working on several pieces from which he expects to make his selection. Among these is a symphony. The orchestra numbers thirty-four members. Mr. Brown expects to give a concert in the city this winter, similar to that given last winter.

The night program will be given by the Choral Union except some of the solo parts and the orchestral accom-

paniment. Th oratorio, Elijah, by Mendelssohn, will be sung.

The glee club is an organization of fourteen male voices. The club expects to give a concert sometime in the winter term. It will sing in chapel. The following are names of the members of the club.

First tenors: M. L. Malcolm, Merl Sims, Chas. W. Tucker, R. H. Musser. Second tenors: L. H. Endacott, E. O. Sechrist, E. C. Magill. First bass: L. M. Baker, W. C. Drake, R. E. Gwin. Second bass: H. J. Plumb, E. H. Smith, W. H. Howe, R. J. Taylor.

Some of the alumni have asked that the concert be given Wednesday of commencement week, as they see in this concert one of the big events of the exercises.

THE THANKSGIVING MENUS.

Chicken, Not Turkey, is the Chief Offering for Dinner.

Thanksgiving is the great American eating day. But some of the women readers may be a little bit in doubt as to what to serve; so here are a few suggestions:

BREAKFAST		
Rolled Wheat	Oranges	Cream
Biscuit	Coffee	Creamed Dried Beef
THANKSGIVING DINNER		
Cream of Oyster Soup	Oysterettes	
Celery	Olives	
Roast Chicken	Savory Dressing	
Cranberry Molds		
Mashed Potatoes	Glazed Sweet Potatoes	
Baked Squash	Creamed Onions	
Vienna Rolls	Butter Balls	
Fancy Cakes	Junket Ice Cream	
Grapes	Bonbons	
Nuts		
Coffee		
SUPPER		
Potato Puff	Chicken Puff	
Whole Wheat Bread	Butter	
Ice Cream with Peaches		
Coffee		
Fruit	Nuts	Candy

And here are three appropriate recipes:

POTATO PUFF.
1 qt. mashed potato 1 teaspoonful salt
2 tablespoonfuls butter 1 egg
Add butter, salt and egg-yolk to mashed potatoes; beat well. Beat white stiff, fold into potato mixture, pile lightly into a greased baking dish and bake in moderately warm oven till brown.

SAVORY DRESSING.
1 pint crumbs, 2 tablespoonfuls butter, 1 tablespoonful parsley, teaspoonful sage, 1 teaspoonful marjoram, ¼ teaspoonful pepper, 1 teaspoonful salt. Use soft bread crumbs; mix all ingredients together; add melted butter and enough hot milk or water to moisten well.

BAKED SQUASH.
Select a medium-sized squash of good shape. Wash well; cut circular piece out of stem end. Remove seeds and soft pulp. Fill center with a moist bread dressing or with oyster dressing. Replace cover cut from stem end and cook in moderately warm oven until tender.

ASKS A FORAGE DISPLAY.

A Display for Study Purposes Suggested by an Interested Student.

Oftentimes it is quite difficult to keep a class interested in the particular subject. Especially is this so in such classes as crop production, forage crops, and feeding stuffs.

Where it is possible a collection of the various grain and forage plants should be mounted and used for class demonstration. With this display the students could see and study the shape, length and size of the forage crops, as well as the different parts of the heads of grain.

Blooming at Christmas.

The horticultural department planted, this week, 2,500 tulip bulbs, 1,500 narcissi, and 1,000 crocus bulbs. These were planted in the several beds upon the campus. About 2,000 bulbs were potted and will be "forced;" that is, they will be placed in the dark for a week or ten days and then brought out. They will be in bloom for Christmas.

Prof. Holton is Busy.

E. L. Holton, professor of rural education, addressed a teachers' association meeting at Washington, Kansas, November 12. He is to speak to the teachers of Jackson County to-day on the subject of "The Public Schools and Community Life."

HOW TO BUY CHICKENS.

LONG, RANGY HENS WITH RED COMBS ARE THE LAYERS.

Rations Tried by the Poultry Department of the College Show the Amateur Breeder How to Feed the Several Varieties.

A poultryman should select his stock with regard to the purposes for which he buys and breeds. In selecting laying hens it should be remembered that short, blocky hens are not egg producers and that the long, rangy ones are. The comb, wattles and face should be red. Birds with large red combs usually are good layers. Experiments made at the Kansas State Agricultural College and elsewhere show that this rule is reliable.

Watch the actions of the hens. A hen in good laying condition is active. She is always singing and hunting for food. She is an early riser, usually is the first off the roost and the last to turn in at night. Investigation has shown that if the pelvic bone is pliable the hen is in good laying condition.

HOW TO FEED THEM.

As to the feed: Hens should be fed a trifle more than is needed at the time. In heavy-laying hens a small amount of fat indicates proper feeding. An over-fat hen is as useless as a thin hen. The poultry department at the college has worked out these rations for chicks:

Shorts..... 2 pounds
Corn-meal..... 2 pounds
Bran..... 2 pounds
Beef scraps..... 2 pounds
Charcoal..... 1 pound

To fatten young cockerels; to be fed twice a day:

Ground oats..... 2 pounds
Shorts..... 2 pounds
Corn-meal..... 2 pounds
Beef scraps..... 1 pound

Here is an excellent ration for laying hens:

GRAIN.
Wheat..... 10 pounds
Corn..... 10 pounds
Oats..... 5 pounds

MASH.
Shorts..... 6 pounds
Bran..... 3 pounds
Corn-meal..... 6 pounds
Beef scraps..... 5 pounds
Alfalfa meal..... 1 pound

Corn is very fattening and should not be fed alone. Oats may be fed alone. They are suitable for fattening young birds. Barley may be substituted for wheat. Wheat may be fed as the only grain. Alfalfa meal, scalded, takes the place of green food. Oil meal is valuable in molting time. Green cut bone should be used only when fresh. Keep plenty of grit in the yard and see that the flock has plenty of fresh, clean water, warmed in the winter.

A Popular Pastor Here.

The Rev. O. B. Thurston, former pastor of the Congregational church of Manhattan, now field agent for Fairmount College, was an interested spectator of the Fairmount game. He reports a steadily increasing interest in education throughout Kansas, and through Oklahoma and Texas, all of which lies in his territory. The interest along agricultural and industrial lines is especially noticeable. Mr. Thurston was popular with the students of this college. He was kept busy along the side-lines, Saturday, renewing old acquaintanceships.

Dental Work on a Tree.

Dental item: A cement filling was given a big cottonwood tree near the main walk a few days ago. The tree was struck by lightning several years ago and the water running down the trunk had begun to rot it at the ground. The ordinary cement used for the filling will keep the water out and thus prevent further rotting.

For the Cadet Officers.

Twenty-four officers of the cadet corps will receive commissions this term. The commissions were printed in the school of printing and are excellently done. They are signed by President Waters and Captain Boice. The non-commissioned officers receive warrants.

No man ever grows who is satisfied with what he is doing.

WHO'S WHO IN COLLEGE SPORT.

An Unprejudiced Account of the Weekly Athletic Activities of the Students.

The big game of the Aggie season will be played next Thursday when the Sons of Ichabod come up from Washburn to tackle the Farmers on their home grounds. Washburn has been playing good ball this year, especially the last two games. The Washburn rooters declare their team is the greatest exponent in Kansas of the forward pass. If Washburn lives up to advance notices the battle will be warm.

A large crowd of alumni and former students is coming for the game. A delegation of wearers of the Blue is certain to attend.

That slump in form the Aggies showed in their games with Creighton and Colorado was apparently temporary, for the boys came out of their lethargy last week long enough to roll Fairmount in the dust of Athletic Park for a 33 to 6 score. That Fairmount touch-down did the business. Up to the time Kobey recaptured the ball on a punt that bounded over Bates' head, and then tore off some 35 yards across the Aggie goal-line, the followers of "Dad" Croyle had been playing rather listlessly. But they were there with the "pep" from then on. Bates took such a lively interest in the game that he returned the kick-off 18 yards before any of the visitors could get up enough applied force to stop him. Eight plays in rapid succession and the ball was six yards from the Fairmount goal. The Aggie team spread out across the field like a huge fan; Bates took the ball and hurled it to Croyle almost on the goal-line. But "Dad" fumbled, and the ball went to Fairmount on the 5-yard line. Taking the punt on the 41-yard line, the Farmers again smashed their way through the Fairmount line and across the goal, the Congregationalists fighting desperately but ineffectively. Sims had the pleasure of scoring the five points that go with the touch-down. Croyle kicked goal.

The second period opened with the ball on the Congregationalists' 23-yard line. It took almost two minutes to rush the oval across for the second touch-down, Roots picking his way daintily through the visitors' line at the extreme corner of the field. Croyle made a pretty catch of the kick out and also managed the goal without difficulty. Roots made another touch-down the same quarter, after Ratliffe, Croyle and Holmes had worked the ball to the 3-yard mark. Croyle booted over again. The feature of the period was a neat pass to Ratliffe by Zoller that netted 15 yards. The dark-featured youth also did some good tackling this period.

The Aggies increased their lead 10 points the third quarter on touch-downs by Roots and Holmes, Croyle missing goal in both cases.

The last period was mostly Holmes, with Croyle and Christian running close for second place. The big tackle has been playing consistent ball all season; and his headlong lunges have opened up huge holes for Roots in every game he has played. Saturday he varied the performance by carrying the ball himself, and, with Roots going ahead as a sort of a plow, carried the ball in four successive lunges 30 yards to the visitors' goal. Christian was given a try-out at quarter this period, and made several sensational runs around end. Bentley was inserted in the line-up at tackle. He is fast and heavy, and unless the signs fail will be a hard customer to handle next season.

Fairmount has a good team this year. The backfield is fairly fast and shows good team work. Had the line been able to hold off the Aggie forwards long enough to give them a start in life the game would have been noticeably closer. Hammond seemed to take especial pleasure in trespassing on the enemy's territory, and frequently downed the runner for a loss. Hudson, Solter and Patton played the most consistent game for the visitors.

Towler.....R. E.....Kobey, Hall
Roots, Bentley.....R. T.....Plank
Hammond.....R. G.....Chance
Zoller, Laffin.....C.....Lee
Seng, Cooley.....L. G.....Entz
Holmes.....L. E.....Dunham
Elliot, Stahl.....L. E.....Grafton
Bates, Christian.....Q.....Patton
Christian, Speer.....
Marxen, Sims,
Croyle.....R. H.....Hudson
Croyle, Ratliffe.....L. H.....Solter
Sims, Whipple.....F.....Bishop

Officials: Wade, referee; Quigley, umpire; Captain Briggs, field judge; Captain Birney, head linesman. Touch-downs—Kobey, Roots 3. Sims, Holmes 2. Goals from touch-downs—Plank, Croyle 3.

The Tyros kept up their winning streak by winning from the Seventh Cavalry, 15 to 0. Pollom is credited with the first score, a neat drop-kick from the 25-yard line doing the business. A series of forward passes gave the Tyros their next score. One to Hain was followed by a quick one to moss, who fumbled almost on the Soldiers' goal. A soldier fell on the ball. The seconds again worked the ball up the field to the 8-yard distance; Beeler made good through the line and the score was 8 to 0. Prather raised it one. The Tyros' last touch-down was of the lucky order. Noel got the ball on an attempted forward pass and scudded 40 yards for a score. Prather kicked goal.

The scrubs lacked some of the "pep" that characterized their previous game, but played good ball when necessary. A scrimmage lasting for an hour and a quarter the night before with the first team had left them a little too stiff to get in their best work. The game was decidedly interesting, and gave more encouragement to those that spent their spare time worrying about next year's team. From the way they have played so far, the seconds are going to furnish some good, fast material, especially adapted to playing the open game.

The Tyros are figuring on getting even with Dickinson County High School Thanksgiving morning. The D. C. H. S. played the Scrubs off their feet at the opening of the season, and can be depended upon to show them a good time on Turkey Day. Guy Noel, '09, is coaching the lads from Chapman.

FAKES AND FORMATIONS.

Nebraska cinched Missouri Valley Conference honors Saturday last when the cornhuskers took the Iowa Aggies into camp by the lop-sided score of 24 to 0.

Those who are interested in picking out next year's team took a good deal of pleasure in watching the work of Bentley at tackle in the Fairmount game. The quarter-miler is fast, several pounds removed from the bantam weight division; and hits the line like a battering ram.

One man on the squad that is going to be hard to replace next year is Zoller at center. His work is not as spectacular as that of some of the back-field, but it is of as high class. The three center men seldom get the credit that is due them. "Z" probably follows the ball closer than any other man on the team. He seems to have an instinct for being on hand when the enemy fumbles, and is almost as successful at getting hold of the ball on short forward passes.

If Pollom were 20 pounds heavier there is little doubt but that he would make quite a reputation at quarter next fall. As it is, he is the most likely looking candidate for the position that has shown up so far. His drop-kicking has been a feature of every game in which he has taken part this season. The forward pass has found a devout believer in the Tyro quarter, and what is more, he is having remarkable success in handling the basket-ball end of the game. He seems also to have that quality of putting the fighting spirit into his team-mates that is one of the essentials of a good field-general. He may not be of Missouri Valley class, but he gives good promise of developing into it.

The only way to keep up nowadays, when competition is keen, is to

Know Your Business

and know it thoroughly. The only way to know **Farming** is to study it. And the only way to study farming properly is to go to the college where the subject is taught. The boy or girl who comes to the

Kansas State Agricultural College

at Manhattan goes away wealthy in information. The educated farmer is a business man. That's why he succeeds. His education, necessarily, must be obtained where the instructors and the equipment are fitted to the task.

Twelve Four-Year Courses

Correspondence courses on eighteen subjects touching every part of farm life and home economics, with special instruction in civic improvement.

Calendar for 1910-'11:

Fall Term.....Sept. 21 to Dec. 23
Winter Term.....January 2 to March 24
Spring Term.....March 27 to June 15

Three Regular Short Courses

For those who cannot take the four-year courses the college offers three short courses at times when they will not conflict with the work on the farm.

A Short Course for the Girls. Begins September 22

Housekeepers' course in Home Economics. Two terms—Fall and Winter. Cooking, sewing, dress-making, home nursing, floriculture, color and design.

A Short Course for the Boys. Begins on January 3

Two Winter terms. A short course in dairying. Study of soils, crops, and live stock production and judging, poultry, management of dairy farm. The College also has a course in dairy manufactures offered to those completing one term's work in dairy farming or one year's practical experience in commercial dairying.

A Short Course in Agriculture. Two Winter Terms

Here the students have a chance to study soils, crops, and live-stock production and judging, poultry, and horticultural practice, farm mechanics or farm management.

Among other important, valuable and practical courses of the college are those of printing and industrial journalism. In the first the boys or girls learn much that they may need in after life, and in the last they may acquire the art of easy writing either as a business or as contributors. Letters by men who know things are always read. Every farm boy and girl should be able to write an interesting letter to the home paper.

THE KANSAS INDUSTRIALIST

Volume 37

Kansas State Agricultural College, Manhattan, Saturday, November 26, 1910

Number 9

THE FARMERS WON IT.

A SCORE OF 33 TO 0 IN THE WASHBURN GAME THURSDAY.

In the Season Just Ended the K. S. A. C. Football Team Made an Exceptionally Fine Record—A Fine Day for the Closing Struggle.

THE SCORE THURSDAY.

K. S. A. C. 33 Washburn 0

THE SEASON'S RECORD.

Games won.....	10
Games lost.....	1
Points scored by Aggies.....	336
Points scored by opponents.....	31

The Kansas Aggies closed a successful season Thanksgiving day by administering a crushing defeat to an ancient enemy, Washburn. The final count was 33 to 0. As a contest the game was a little too one-sided to be exciting; as an exhibition of the possibilities of team work in football it was worth coming miles to see. Towler, Roots, Zoller, Seng, Bates, Croyle, Christian, Sims, Speer, Ratliffe and Elliot put on the moleskins for the college the last time, and they kept things moving from the time the whistle blew.

Christian made the first touch-down—14 yards on a direct side pass from Zoller. Roots, the big tackle, is credited with the next. Two penalties and McCarrol's long punt gave the Aggies the ball on their own 14-yard line. Roots and Holmes made 11. Croyle battled through for 19 before he was downed. Christian got away with 18, and "Dad" came right back with 16 more. Bates varied the performance by calling on Roots, who responded with a 32-yard march around end. Christian ran an excellent interference.

Christian, Towler, and Bates are credited with the other three touch-downs. The Sons of Ichabod took a decided brace on defense the latter part of the game, and prevented the Aggie machine from scoring in the last period. The visitors showed little class on offense. In scrimmage they carried the ball a grand total of 41 yards. McCarrol's punting was a feature.

It is hard to pick stars from a bunch that played as the Farmers did Thursday. Croyle left a row of Washburn players behind him every time he got the ball. Christian was as fleet and elusive as ideas on examination day. A column could be devoted to Bates. He punted long spirals; returned punts in the best form he has shown since he made the team; he drop-kicked goal from the 40-yard line and his run of 78 yards for a touch-down was the feature of the third period. He kicked five goals from touch-downs. Every man on the team made plays that ordinarily would be considered stellar.

FARMS NEED WATER SYSTEMS.

Impurities from Barn-Yards Create Grave Danger to Health.

Danger from impure water threatens you on the farm as in a crowded city; indeed the risk is greater because the farm water goes from source to consumers without any attempt at purifying. Most cities have a sewerage system that disposes of the waste material of the inhabitants, but on the farm this is often neglected and the water supply becomes contaminated with disease germs. The ordinary barn-yard and cesspool often are close to the well and thereby easily contaminate the drinking water.

Farmers are not the only ones whose health is endangered by these conditions. The city dwellers are exposed, for the milk that is delivered in the city becomes infested with disease germs in uncleanly surroundings. All this is wrong. Every farm should have a sewerage system to dispose of the waste material from barn and house. Several systems now are

in use on Kansas farms and have proved very effective.

Any man with land worth \$50 an acre or more should have a private water system on the place. It's a mighty poor section that isn't worth that much. A hundred dollars an acre is nearer the mark—and the value of two acres would equip the farm so that health would be protected, living—bathing—would be nearer a civilized plane, and perhaps the boys would leave to escape the task of pumping for the stock early and late in any kind of weather.

A descriptive bulletin, illustrated, has been prepared in the Kansas State Agricultural College showing how to install water systems on farms at moderate cost. This bulletin can be obtained upon application.

MAD STONES ARE FAKES.

Rabies, Furthermore, Are Not Confined to Summer Days.

Your dog or other live stock is just as likely to develop a case of rabies now, or even in the coldest winter, as in July or August. Did you know that? Most persons suppose that "mad dog" scares come only in the summer. That's wrong. Furthermore, you shouldn't put any faith in "mad stones." A bulletin recently issued by the experiment station of the Kansas State Agricultural College contains this information.

Many persons suppose that dogs are more susceptible to rabies than any other animals, but this is not so. Cats, hogs, horses, cattle and even human beings are just as likely to develop the disease if once bitten by an infected animal. But the dog is more likely to spread rabies than any other animal because of its roving nature and because its only means of defense is by using its teeth.

The symptoms of the disease usually develop in about two weeks, but cases are known where they did not develop for a year. If rabies is to be cured it must be treated before the symptoms have developed at all.

Rabies affect animals in two ways: dumb or furious. In the dumb form, the animal seeks secluded spots, becomes unable to eat, and finally is paralyzed all over. It usually dies in a week or ten days. This often turns to the furious kind, which is much more dangerous, for then the animal becomes restive and roves about, spreading the disease to all animals with which it comes in contact. This period lasts three or four days and is followed by paralysis and finally death in about ten days.

The cause for rabies, or hydrophobia, is small, round or oval-shaped bodies on the brain, from 25000 to 10000 of an inch in diameter. These are called Negri bodies. The only certain way to determine the disease is by microscopic examination of the animal's brain.

Farming with Dynamite.

L. E. Call, of the agronomy department, H. B. Walker, the drainage engineer for the agricultural extension department, and Pleasant Crabtree, expert on farm management, recently made a trip to Johnson County. An interesting experiment was performed with dynamite. A three-acre plot near Olathe was dynamited in rows, the charges being placed three feet deep and fifteen feet apart. The future crops from this plot will be weighed to see if dynamiting will increase the productivity of hard soils.

A Guild to Entertain.

The Ladies' Guild of the Episcopal church will have a bazaar in Woodmen's Hall, December 2 and 3. An oyster supper will be served the night of December 2; dinner at noon, December 3, and supper that night.

MAN, NOT LAND, BLAMED.

PURE SEED AND PROPER TILLAGE ARE NECESSARY FIRST PRINCIPLES.

Prof. Jardine Adds Valuable Information to Last Week's Suggestion as to Private Seed Plots on Every Farm—Present System Wrong.

If there is one thing in which everyone should be interested it is how to increase the wheat yield of the state. THE KANSAS INDUSTRIALIST printed a pertinent article, November 19, urging farmers to set aside an acre as a seed plot—to grow their own pure, hand-selected seed. In the present piece W. M. Jardine, professor of agronomy, emphasizes the importance of pure seed and proper soil tillage.

Every wheat grower in Kansas, Prof. Jardine says, should recognize the value of planting pure seed. There are three ways by which a farmer can increase the net earning of every acre cropped to wheat:

1. By giving his soil the proper care, with respect to plowing, tilling, crop rotation, etc.

2. By planting pure seed and caring for it properly thereafter until it is harvested.

3. By growing a variety that is first class in milling quality, thereby demanding the best market price.

The first two steps will increase the yield and the third will increase the price of every bushel produced. To accomplish this every wheat grower should have a breeding plot to produce the best pure seed of standard variety. On this breeding plot, too, the best methods of soil management should be carried out.

If every farmer could be persuaded to grow wheat from pure seed bred up on his own farm, on land that had been properly tilled and worked, 25 bushels of wheat to the acre instead of 13 bushels would be recorded. In almost every district such farmers are operating; their yields always exceed 25 bushels to the acre. This proves the possibilities of any particular area in this state for wheat production. The fault is with the man and not in the country that such low acre yields of wheat are produced.

Alumni Can Do This Work.

Rural life presents just as many social problems as can be found in large cities. The graduates of the Kansas State Agricultural College should help to solve these problems and aid in the social uplift of rural communities. This is the opinion of Mrs. Eliza Harris Manley, chairman of the state committee of the Y. W. C. A., who spoke in student assembly Thursday, last week. Mrs. Manley told of the work of the Y. W. C. A. among the young women employed in clothing factories, tobacco mills and other places where women are compelled to do hard work without a fair recompense.

GOOD WATER FOR GOOD BUTTER.

The Flavor Often Depends Upon the Thoroughness of the Washing.

Why is it that good butter often acquires a bad taste in a very short time, even if kept in a refrigerator? Chiefly because the makers fail to wash their butter thoroughly or use impure water in the washing. The bacteria in most water that has not been sterilized increase rapidly when butter is put in storage. Of course, the increase is greater when the butter is in a hot place than when in a low temperature.

If the butter is washed with sterilized water fewer bacteria will be left in the butter to develop, therefore the flavor of the butter will stay good a longer time. This is what the maker of the butter should work for. Therefore to make this good butter, use sterilized water, if it can be cooled and used im-

mediately. Filtering the water helps some, provided the filter is cleaned and refilled frequently with filter material.

Water kept at a low temperature, from 40 to 50 degrees Fahrenheit, for a few hours checks the development of bacteria, or destroys from one-half to four-fifths of them. But this water must not be allowed to stand too long or it will be worse than it was in the first place, because after it has stood longer than a certain time the bacteria begin to grow again, especially if the water is kept in a wooden vessel. By careful washing, the butter maker will receive a better price. The cost of purifying the water is very small compared with the extra profit. If you make butter to sell, try sterilizing the wash water and see if it does not pay.

CONCRETE AND ITS USES.

A Material That Every Economical Farmer Should Study.

Chicken-houses, pig-pens, fence posts, barn floors—these and a lot of other things can be made with concrete. It is one of the chief building materials to-day. On up-to-date farms it now has an important place. In nearly all of the many uses to which it has been put it has proved a success.

Concrete costs a little more than lumber at first, but when once in it is practically permanent, whereas lumber will wear and decay and require replacing in a few years. Concrete is used almost exclusively now for submarine structures and for foundations in damp, yielding soils, on account of the economy of construction and its efficiency and durability. It is used largely for bridges and culverts and has proved far superior to iron or steel.

Walls moulded in one piece have been built, but such large areas do not have room for expansion and soon crack after the forms have been removed. This is also true of sidewalks and floors that have not been divided into blocks. Tests are being made at the Kansas State Agricultural College to determine the endurance of larger blocks of concrete in walks.

Although concrete is comparatively a modern invention, beton, or hydraulic cement, was used in some of the works of the Babylonians and Egyptians and soon after by the Greeks and Romans. The pyramid of Ninus is a solid block of this material. The piers of the Egyptian labyrinth, which is now over 3,600 years old, are of beton. The Romans used it in constructing aqueducts, piers, and roads. Probably the most extensive use of beton was made by the French in their work in the harbor of Algiers where the waves were constantly undermining the coast. The work began in 1831 and ended in 1836. It cost the government about \$420,000.

A Boom for Aggieville.

"Aggieville" is up and coming. Aggieville, or Little Town, as you prefer, is made up of the fifteen stores on Moro Street and Manhattan Avenue, close to the college. The West Side Commercial Club has been organized and officers elected. The purpose of the club is to get better fire and police protection, to have better sidewalks and crossings—in short, to improve that part of the town. It is hoped that one of the down-town banks will open a substation there next spring.

Students Eager for Home.

A number of students were so eager to get home in time for the Thanksgiving dinner that they set out Monday, thus allowing for railroad wrecks and unavoidable delays. The deans of the several departments were very busy listening to the excuses of the students who wished to leave before the regular holidays began.

KEEP THE SOIL MOIST.

ONE OF THE PRINCIPAL THINGS IN GOOD FARMING.

Not Only to Get Larger Yields Should Farmers Strive, but to Preserve the Land's Fertility—A. M. Ten Eyck's Discussion.

The greatest problem in western agriculture to-day is not how to get larger crops out of the soil for a few years, but rather how to produce paying crops every year and at the same time maintain the fertility and productiveness of the land. A. M. Ten Eyck, superintendent of the Fort Hays experiment station, says:

So far as cultivation is concerned there are three principal steps in the conservation of soil moisture:

HOW TO TREAT THE SOIL.

"The soil must be loosened to a considerable depth in order to receive the rain as it falls.

"The plowed soil should be packed down against the bottom of the furrow that water may return toward the surface as it is needed.

"The top two to four inches must be kept loose to prevent surface evaporation.

"To cultivate your farm according to these principles does not require extra or high-priced machinery, but merely thoughtful use of the machinery found on most farms."

The depth of plowing depends on the nature of the soil, a light or sandy soil requiring less depth of plowing than a heavy, compact, clayey or gumbo soil.

USING A SUBSOILER.

To insure good connection between the furrow slice—the ground thrown up by the plow—and the bottom of the furrow it is necessary to use a subsoiler in the more compact soils. This subsoiler need not be large. It may be attached beneath the plow.

The soil at the surface should be kept loose all the time to prevent evaporation. This may be done with many of the common farm implements.

A new method of preparing wheat ground is to first list the ground immediately after harvest. After the weeds have sprouted the field is levelled with a disc sled and a harrow. The field must then be kept clean and the surface loose until seeding time.

K. S. A. C. in a Poultry Show.

F. S. Jacoby and T. E. Schreiner, of the poultry department, will attend the Missouri State Valley poultry show at Kansas City, November 29 to December 3. With possibly one exception, this is the largest poultry show west of New York. Four or five thousand birds will be shown.

Becoming Modesty, This.

A demonstration in chicken dressing was given recently by F. S. Jacoby, of the poultry department, before a class of girls in domestic science. The demonstration was given in the basement of the dairy building where an ingenious device for killing fowls has been fitted up by Mr. Jacoby.

Called on the Orpingtons?

A fine pen of Buff Orpington chickens has just been received by the poultry department. It is a gift of C. D. Adams, '95, of Olathe. Mr. Adams has some exceptionally fine stock. He allowed T. E. Schreiner, of the poultry department, to select the fowls to be shipped here.

Do It Now.

Every one that has the money or the credit and the good will should do the Christmas shopping now. If you wait until December 20 to buy you'll find "pawed-over" stock.

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PRES. H. J. WATERS.....Editor-in-chief
PROF. C. J. DILLON.....Managing Editor
DR. J. D. WALTERS.....Local Editor

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THE NEW RURALISM.

If doubt existed in any mind as to the important effects of the investigation conducted by the Country Life Commission in President Roosevelt's term of office, that doubt must vanish in a careful review of the present rural conditions. Speaking with somewhat intimate knowledge of Kansas, particularly, THE KANSAS INDUSTRIALIST believes to-day in the existence of a social renaissance. One needs only to read the daily and weekly papers printed in hundreds of prosperous villages and cross-roads corners, the faithful chroniclers of the community's activities, to find buoyant hope for the future of farm life.

The recent organizing of a Farmers' Dining Club in Wyandotte County, its dinner, and the inspiring and instructive speeches that followed, emphasizing the dignity of labor; the close connection between heads and hands; the monthly or weekly meetings of farmers' institutes in a hundred counties; the special lectures provided by the agricultural college, largely attended; the movable cooking and sewing schools; the farmers' winter short course in which sometimes a thousand men and women and boys and girls participate; the corn contests; bread contests, sewing contests; the district fairs like that described recently in the *Kansas City Star* in "The Awakening of Alert," in which was shown the inestimably important influence of graduates from the state's great technical school—all these achievements denote the growth of a new and mighty spirit in the country life of Kansas, led by the agricultural college that the people themselves support.

But these things, significant as they are of a welcome change, are of passing interest compared with the new social activities in small places. No more striking proof of a fine good-fellowship could be desired than that provided by the country correspondents, often the rural mail carrier, in the "Personals" columns of the country press. These items make up the news of the day or week. And when it is related that the Literary met Friday night and debated upon some question of agriculture or of social ethics or literature that interested fifty persons and drew them closer together, the space the paper gave was well used, for it described the forming of environments for which the country's thinkers have written and preached and pleaded for years.

The New Ruralism has come to stay. It will grow stronger if the country ministers bestir themselves and seize the golden chance to be of real service to men; it will reach its proper standard when present-day students of agriculture are in possession of the land.

It warms the heart to find huskings-bees coming back into favor; to know that some farmers are realizing the rights of their children in a share of the farm's proceeds; to note the increasing use of motor-cars, of labor-saving machinery and of modern methods in the land's tilling. The cry need not be "Keep the children on the farm." What Kansas, and other states, needs now is a campaign to get father back to the land and keep him there instead of letting him drift to town, leaving his land in tenants' hands. With landlordism abolished, or reduced, Kansas is safe.

No Dirty Faces Here.

Did you ever think how much labor and expense is required to keep the college clean? Did you know that the college has a mile and a half of roller towels laundered every month, and that 200 pounds of Ivory soap, 200 pounds of Lava soap and a half ton of Grandpa's Wonder soap are used every year.

It requires the labor of thirty boys all day Monday and three hours on other week days to keep the buildings clean. In addition to overseeing this force, Custodian Lewis must watch the geysers (drinking fountains), the heating system, and guard against fires. The college has hand fire extinguishers in all of the buildings and a chemical fire engine of seventy-five gallons capacity and 300 feet of hose.

The system that has been worked out for the night watchman is complicated and interesting. This guardian has a small clock, in a leather case, that cost \$50. In the veterinary, horticulture, domestic science, Anderson and chemistry buildings there are small iron boxes. Locked in each of these boxes is a numbered key that cannot be taken away. The watchman opens the box and slips the key into place in the side of the clock and presses a lever. This makes an impression on a moving piece of paper and the time at which he visited the building is thus shown.—*Manhattan Mercury*.

A Golden Text.

The sleep of a laboring man is sweet, whether he eat little or much: but the abundance of the rich will not suffer him to sleep.—Ecc. 5:12.

AN EX-RECENT'S KIND WORDS.

Edward Seerest, in California, Comments Upon the New Paper.

From a recent letter by Edward Seerest, an ex-recent (1893-'95) to Dr. J. D. Walters, written from Waldheim, California, the following is taken:

I have often thought of you since I left my old Kansas home, three years ago, and my memory wanders back, time and again, to the eventful years when I was connected with the great technical school back in the Sunflower State. The spirit moved me irresistibly this time to send a sign of life on the advent of the INDUSTRIALIST with new dress. I want to send you a few words of my approval and appreciation. No stronger evidence could be furnished me at this distance of the great strides forward along educational lines in every field of agricultural and industrial endeavor in Kansas, than this improved, bright, newsy, handsome, up-to-date KANSAS INDUSTRIALIST. . . . May you yet remain many years, as you have so many in the past, the third person in its editorial trinity. Please remember me kindly to Professors Webster, Roberts, and the others of the old, time-honored "stand-bys." Tell all of them that I desire to be still considered a live and kicking Kansas Jayhawker—a Kansan to the end.

REMEMBER THE BAZAAR.

December 9 is the Day Set for the Annual Y. W. C. A. Sale.

Don't forget the morning of December 9. That is the date set for the Y. W. C. A. bazaar. The girls made 150 pounds of candy last year and it lasted almost through the first hour. The supply will be more plentiful this year.

But candy won't be the whole show. There will be all sorts of little nick-nacks good for Christmas presents—little souvenirs that you can send home to the folks, or that will more than please a friend. These pieces of fancy work and other articles are made by members and friends of the association. If you have a little spare time and like to help a good cause along, you are at liberty to add your share to the list of things that will be for sale in the main hall December 9.

Think less about your rights, more about your duties.—*Fra Elbertus*.

PICTURE WORK IS LIKED

PHOTOGRAPHY CLASS HAS EIGHTY STUDENTS ENROLLED.

Faculty Members, Also, Are Taking the Course for the Instruction It Gives in a Subject in Which All Are Interested.

The college course in photography has proved so popular that all those that desired to take it could not be enrolled. Several members of the faculty are in the class for the knowledge it will give them of value in research work.

The course consists of a two-hour lecture and two or four hours a week of practicable laboratory work. The lectures are given by an experienced photographer on the composition of pictures, exposures, development of negatives, intensifying and reducing plates, printing and mounting, enlarging, and making stereopticon slides. The physical and chemical laws employed in the subject are demonstrated and explained. The laboratory work gives practical illustrations of the lectures.

Every student enrolled is required to do certain lines of work designated by the instructor. He must take a certain number of views of buildings, animals, landscapes, etc. This work is afterward criticised by the instructor and the faults in composition and development pointed out with information telling how to avoid or correct the mistakes. Several pictures taken by members of last year's class have been enlarged and sold for high prices. Several students added to their expense money by using the knowledge derived from taking this course.

So far as is known, this is the only course of its kind in the West in a school similar to the Kansas State Agricultural College. It was started a little over a year ago after the manager of the engraving plant of the *Topeka Daily Capital* told a visitor from the college that he wished amateur photographers and scientists could take pictures suitable for making cuts.

HERE'S THE HONOR LIST.

The Long-Delayed Report Was Read Wednesday in Students' Assembly.

The honor system was adopted in this college last spring. As finally agreed upon by the faculty it represents the best in the systems of twenty leading universities or colleges, with modifications believed to be essential. The honor system idea was drawn from the University of Chicago. The main feature here is that the honors are "weighted"—that is to say, grade "E" (Excellent) carries +2 points. If a student makes grade "G" (Good) he gets +1 point. If he receives grade "P" (Passed) he gets 0 points. In the same way going down the scale, if he gets grade "C" (Conditioned) he gets -1 point, and if he receives grade "F" (Failure) he carries -2 points. Now in the way the honors are computed, the records in grades that a student makes for the year in the junior or the senior class are taken, and all the results he has in the way of honor points are added, taking what is known as the "algebraic" sum of the points—that is to say, the minus points are subtracted from the plus points, to get the net sum. The student's record for the year, therefore, is the net result obtained by subtracting the sum of all his minus points, if he has any, from the sum of all his plus points.

A modification was adopted in which the honor points are further weighted by multiplying the number of points for any given grade by the number of hours a week for which the subject is given. In the case of a subject consisting wholly or in part of shop or laboratory work, one-half of the number of hours required for such work is taken. This follows the usual custom of making two hours laboratory work balance against one hour of class work. Upon the basis of this system the honors for last year's senior and junior classes have been computed. The list:

Seniors.—Harold Rowe, 94; William

Orr, 87; James C. Browning, 85; Ruth Kellogg, 84; C. W. McCampbell, 84; Eva Rees, 84.

Juniors.—O. C. Crouse, 111; Clara Bergh, 98; Florence Snell, 97; Homer Sloan, 96; Robert Mosely, 94; Clyde McKee, 91; Florence Wyland, 90; Mary Parsons, 88; Clay Lint, 82; L. R. Hain, 81; Clara Shofe, 81.

A new feature to stimulate and encourage students to do better work gives those who made senior honors one credit toward the Master's degree. To give special encouragement to juniors to "make good" for two years, the honors have been made cumulative. If, however, he gets senior honors, also, the next year he receives three credits toward the Master's degree, instead of the one credit that the fellow receives who made honors only in the senior year.

"INDUSTRIAL PROBLEMS."

A Book by N. A. Richardson, '80, a Writer on Socialism.

"Industrial Problems" is the title of a well-written and attractive volume of 232 pages, published by Charles H. Kerr & Company, Chicago. The author is N. A. Richardson, '80, the writer of a number of works on national economy; among them, "Introduction to Socialism," "Methods of Acquiring Possession," "Railroads and Reform," etc. Prof. Richardson says frankly in the preface that "the book is intended for use in general propaganda work of the Socialist party."

I have set down the things that I think all should know," he says. "My ambition is to get some truth into people's minds, and to do this I have endeavored to keep within range of easy comprehension, but I have hewn close to what is technically scientific in Socialist philosophy."

The book is interesting and many of its arguments are so strong that they permit only one conclusion. He starts out by enumerating nine great industrial evils as a bar to human progress and then endeavors to show in the following chapters that they have their origin in a common cause which cannot be remedied without changing what he calls the present parasitic capitalist system of industry.

ORCHARDING FOR THE FARMS.

Every Boy Should Know How to Care for the Fruit Trees.

Every farm boy in Kansas should know some of the essential things about a farm orchard. For example, he should know that trees should be kept low, broad and spreading; the top open to the sunlight; thrifty and free from insects.

The farm boy that studies horticulture at the Kansas State Agricultural College learns to care for an orchard properly. Every tree is a different problem and must be treated according to its needs. Some tree tops are brush heaps and must be pruned severely. To remove large branches will subject the smaller ones to sunscald, and borers will infest the wound. Plum and cherry trees do not require much pruning. Peach trees require different treatment than other fruit trees because the fruit is grown on the wood of the preceding year's growth.

The boy must exercise his judgment and think out the best thing to do in every case. He will learn to depend on himself, and with the knife and saw and a little knowledge soon transform a scraggly, unproductive orchard into a thing of beauty and a source of profit.

The possibilities of fruit culture in Kansas have been overlooked, with the result that in many farm homes fruit is a luxury. This will all be changed by the boy that interests himself in utilizing waste and unremunerative parts of the farm for the growing of fruit.

How the College Helps.

W. S. Gearhart, highway engineer, of the college extension department, is preparing plans and specifications for a large reinforced concrete bridge for the city of Englewood, Clark County, in the southwestern part of the state.

Dread.

I do not dread the undiscovered bourne. But I do dread to spoil the life I have; And, when I reach the portal to the grave, Look back and mourn.

I do not dread the battle and its odds, But I do dread to bear a part in it; So at its ending I shall feel unfit To face the gods.

I do not dread the burden nor the road Which I must travel with it, if I can Prove worthy of my task, and like a man Take up the load. —*Lee Shippey*.

SUNFLOWERS.

A weed is a plant out of place.

When you are down in the mouth think of poor Jonah.

Henry Swagger, of Randolph, must be the stuck-up thing.

Some men seem to believe that thin ice is safe if you can skate fast enough.

Will Wade, who lives in Stockdale, should have no trouble in times of high water.

A "Be-cheerful-you-will-find-it-pays" poet has just begun operations in Merriam.

Chickens, it is said, are never troubled with mites in Manhattan. Dust baths, doubtless.

And now, just when life seemed brightest, they're printing the pictures of the successful candidates.

Reflection from the Olathe *Mirror*: "While only a young man, Prof. Schreiner is 26 years of age."

Some students couldn't do better than to take the new course in plating. They might learn to brighten up.

Another by Charles Elwood, sociologist: "The family and the home are problems in human conservation."

The untraveled will begin to worry, also, as to whether it is Dee-as or Die-az whose job is in danger in Mexico.

Quail, the esteemed *Mercury* gravely declares, are thick this year. Well, one thick quail is worth several thin ones.

If the "two fat men" on the *Emporia Gazette* will use a spoon in eating soup they will spill less of it on their vests and neckties.

Terrible tidings in the Larned *Tiller and Toiler*: "Heartless Assassin Poisons Dogs. Some Brute in Human Form Scattered Strychnine."

Twenty newspapers were printed in Kansas in November, 1858. Now there are 752—or, at least, there were that many the day before election.

The country will now see how in many ways it is possible to misspell the towns and cities and states of Mexico. War is a fearful thing.

A civics student has a new way to answer any and all questions. When he ran out of information in trying to answer a question, he added "etc." He pulled through—only part way.

Dry days are these in Paradise. "Into each life," the poet has said, "some rain must fall," says that town's correspondent in the *Russell Record*, "but we are beginning to fear our share has fallen far remote from us."

"How to buy a farm and build a home for \$1.25" is the cheerful advertisement of a new book offered by a mail order house in Kansas City. Once more the class is requested to observe the importance of proper punctuation.

Only five girls are taking the course in floriculture. Will the wife of the future depend wholly upon wheat for the flour of the family? (Note—A pad of note paper and a falcon pen to each of the first five who send in correct answers to this.)

Now is the winter of our discontent when mother, bless her, sits up until midnight embroidering impossible holders for neckties or shirts, that represent forty hours or more of labor and could be bought, ready made, at the Racketty Racket store for forty cents. When will women get next?

A good-natured "easy mark" equipped a hunter a few days ago and sent him forth thinking to get a Thanksgiving turkey. He provided a shotgun and a box of ammunition and a bird-dog. The man killed one turkey—count it—one. Also he kept it. Thus is man's inhumanity to man exemplified.

LOCAL NOTES.

The two lower classes have passed resolutions against dancing.

The Glee Club gave some excellent music at chapel last Saturday.

George Potter came in Sunday for a few days' visit with old college friends.

Miss Grace Spencer, of Junction City, was down for the Kappa Delta dance Tuesday.

The Ionians gave a dinner last Monday night to the Hamiltons in the Women's Gymnasium.

Guy R. Davis, of Kansas City, Missouri, spent Saturday renewing old college acquaintances.

Classes held their meetings Tuesday last week, as the regular class-meeting day this week is a holiday.

The electrical department has been doing considerable wiring for lights in different laboratories and offices.

The Y. W. C. A. sold college pins the first part of the week. These pins are purple with the letters K. S. A. C. in white.

Jesse J. Fry resumed his college work this week after having been absent for some time on account of chicken-pox.

The electric power was off Tuesday afternoon on account of the bursting of a pipe through which the water enters the boiler.

G. E. Raburn, assistant in physics, is carrying on a test to determine the heat value of all kinds of coal sold in Manhattan.

The domestic art department has added more sewing tables to its equipment. The rooms that were vacant last year are now in use.

The juniors made a feeble attempt to conduct chapel exercises last Saturday. They were tremendously applauded by yells from the senior class.

H. W. Pugh, of Junction City, spent Thursday afternoon at the college. Hog-cholera has developed in Mr. Pugh's hogs. He came here for a supply of hog serum.

Ruby L. Heasley and D. F. Bachellor, former students in the Kansas State Agricultural College, were married November 1 at Assaria, Kansas. They will live in Seattle, Washington.

The horticultural department is setting gate-posts at the ends of the walks on the east entrances. The gate-post at Lovers' lane, that was knocked down by a traction engine, is being rebuilt.

The floor of the Auditorium stage should be renewed. The constant moving of the piano on the stage has damaged the floor badly. Uneven boards broke a leg of the big piano one day last week.

Ernest Wyatt and A. Brandom, members of the Kansas Wesleyan University football team, spent Saturday, a week ago, with college friends. They refused to talk about the St. Mary's game.

The students in electrical engineering have been studying the new and up-to-date features of the starting apparatus for the new high tension motor at the Paddock marble works and also the wiring of the new post-office building.

The agricultural department has growing plants of five varieties of millet, nine of clover, eight of grasses, alfalfa, Russian sunflowers, cow-peas and soy-beans in the greenhouse. These are to be used for demonstrations in the class room.

C. W. Strickland has sold his fine bottom farm, one mile and a half east of Junction City, to Dr. Leach, of Kansas City. Mr. Strickland has been an extensive breeder of fine stock. His farm contained many improvements advocated by the Kansas State Agricultural College.

The domestic art department will soon be ready to make cloth. A spinning wheel and a loom have been installed. These are intended primarily for exhibition and to show steps in the evolution of cloth making. A limited amount of instruction will be given in the operation of the loom.

The college has been promised about five car-loads of coal a week. This will be an average of about 200 tons a week. The heat and power department uses from thirty to forty tons a day in cold weather.

Asbury Endacott has been in Manhattan for a week or two drawing sketches for a \$20,000 brick building to be erected in Topeka. If his plans are favorable he may get the contract for the architectural work of the building. He expects to enter college next term and graduate with the 1911 class.

The entomology department has occupied its section of the new greenhouse. The incubators were started last week. Green-bugs and chinch-bugs will be reared on an experimental patch of wheat in the greenhouse as material with which to carry on experiments. Arrangements have been made in the northeast corner for the office.

The Holophane Glass Company is sending the electrical engineering department all the styles and shapes of shades made in its plant, showing the possibilities of increasing the candle-power of lamps in certain directions and of producing uniform illumination in residences and business houses. The A. I. E. E. will take up the study of illumination at the next meeting, the first Tuesday in December, at which meeting the use of the shades will be described and the subject of illumination for students discussed with reference to its effect on the eyes. Any one interested is cordially invited to be present at this meeting.

FLOWERS FOR HOLIDAYS.

A Few Timely Tips on How to Sidestep the Florist.

Would you like some flowers for the holidays? Everybody does. Well, here's a way to get them without mortgaging your property to the florist. Just follow directions.

Take a number of bulbs. Any of the common species will do. Using rich, fine earth, pot them up, either in small pots or in boxes. Then set them in a dark place, preferably the cellar. But one thing that is important, keep them well watered. This is called the "forcing" process. Putting the bulbs in a dark place insures better stems and prettier foliage.

After ten days or two weeks the plants should be brought out and put near a window, getting plenty of sunlight. Then watch them grow. But don't forget the water.

Paper white narcissi and hyacinths are much used for this purpose. Of tulips and crocus, scilla and snowdrops, you may plant any or all. The florists' prices will not fall this winter.

ALUMNI NOTES.

L. E. Hazen, '06, is teacher of agriculture and military tactics in Eureka academy, Eureka, Kansas. He has lately applied to Professor Walters for a course in advanced descriptive geometry.

John B. Peterson, '08, writes from Monmouth, Montana, that he has been elected county surveyor of his county by a large majority and that at the same election \$100,000 were voted to improve the public roads.

Changes of address: J. L. Smith, '08, 1016 W. Fourth Street, Topeka, Kansas; W. A. Anderson, '98, 709 E. State Street, Ithaca, New York; Marcia E. Turner, '06, 219 S. Holbrook Street, Fort Scott, Kansas; Grace A. Berry, '10, Box 44, Nickerson, Kansas; Jessie M. Ballou, '05, Delphos, Kansas; E. L. Shattuck, '07, Rush-ton, Louisiana; Vernon Matthews, '04, Edmore, North Dakota; W. H. Harold, '05, Topeka, Kansas; V. Viola Norton, '04, Cheyenne Wells, Colorado; J. E. Cooley, '07, Room 204, Monroe Apartments, Monroe and Indiana Streets, Spokane, Washington; L. W. Fielding, '05, 230 Genessee Street, San Francisco, California; Mrs. Kate (Oldham) Sisson, '92, Columbus, Ohio; Fritz Harri, '09, Box 225, University Street, Seattle, Washington; George A. Moffatt, '08, Box 229, Y. M. C. A., Seattle, Washington.

HOW TO FEED SILAGE.

THE FIRST OF TWO IMPORTANT ARTICLES BY GEORGE C. WHEELER.

Turning Waste into Valuable Material That Will Produce Beef or Milk—What Experiments Have Shown Here and at Other Stations.

When more than 400 silos are built in a season in Kansas it's a fair indication that farmers are realizing that for many years they have wasted from one-third to one-half the corn crop, says G. C. Wheeler, of the extension department.

A silo does not greatly change the character of the nutrients in the corn plant. It is a roughage feed, the process of saving acting, merely, to retain digestibility and palatability in materials that ordinarily would be rejected. Tests have shown that from 35 to 40 per cent of cured stover was rejected, while the same material from the silo was eaten with practically no waste.

Two trials of silage as a feed for finishing steers for market have been made at the Kansas experiment station. The amount fed in both instances was small. It was fed with the grain ration and served more as an appetizer. Alfalfa constituted the bulk of the roughage. When marketed the silage-fed cattle brought 25 cents more an hundredweight than similar cattle receiving no silage. The amount of corn and alfalfa saved by the addition of the silage would have made the silage worth about \$5 a ton, based on present prices for corn and alfalfa. The results in the second trial were very similar.

WHAT TESTS HAVE SHOWN.

The results noted at other stations have been so highly satisfactory that Kansas steer feeders may well consider the methods followed as safe guides for their own practice. The Ohio station fed three lots of steers corn silage in comparison with three lots on dry feed. Twenty-five pounds of silage daily with 17 pounds of shelled corn and from 1 to 2½ pounds of cottonseed-meal were fed with some additional dry roughage. The grain was fed with the silage. The dry feed lot received the same grain ration except that larger quantities of shelled corn were fed and all the roughage was fed dry. The gains made in the different lots were almost identical, but the silage-fed cattle made gains more cheaply because of the small amount of grain required.

THE VALUE OF A TON.

The value of a ton of corn silage was computed on the basis of the cost of other feeds it had replaced. It ranged from \$2.65 to \$4.63 a ton, the latter figure assuming corn to be worth 50 cents a bushel, corn fodder \$5 a ton, and clover hay \$10 a ton.

At the Indiana station the first two tests compared corn and clover hay with corn, clover hay and corn silage, the silage being fed at an average rate of 15 pounds a steer daily. The use of silage reduced the amount of clover hay eaten and consequently made the ration more carbonaceous in character. The results from a profit standpoint were slightly in favor of the silage lot. The next tests made by this station introduced cottonseed-meal into the rations and resulted in the gains being made \$1 cheaper an hundred-weight where silage was fed, corn costing 50 cents a bushel, cottonseed-meal \$28 a ton, and clover hay \$8 a ton. The average amount of silage fed daily for the six months' period was 15 pounds, more being consumed at the beginning, and the amount decreased with the advance of the feeding period and the increased consumption of grain. It was computed that, under the prevailing conditions, silage was worth \$6.02 a ton when fed in this way. Later a test was made at this station comparing corn, cottonseed-meal and corn silage with a similar lot receiving some clover hay in addition. The lot receiving silage only as a roughage made the more rapid and also the cheaper gains. In this test as high as 43 pounds of silage was fed daily to a steer the first month and about 16 pounds daily the sixth month. The average daily feed of cottonseed-meal

was three pounds to a steer for the six months, beginning with about 2½ pounds and gradually increasing to 3.4 pounds.

Further information as to silage feeding will be published next week.

BETTER BUTTER NOWADAYS.

Prices Improving, too, Through the Dairy Commissioner's Information and Help.

Farmers have received fully two and a half cents a pound more for their butter fat this year, in proportion to the selling price of the butter, than ever in the history of the state. This has been largely due to the information disseminated by the office of the dairy commissioner at the Kansas State Agricultural College. The cream buyers and cream station operators, through instruction of this office, now conduct their tests for butter fat more accurately. Fewer complaints are heard from farmers. More than 1800 cream buyers have been instructed and examinations given as to their proficiency in making cream tests and in their knowledge of the ordinary sanitary regulations required of dairymen. Where competent these men have been granted permits to buy cream.

The number of creameries in the state is increasing. The quality of the butter is better, and its reputation abroad has improved. Through the efforts of the dairy commissioner's office, the sanitary conditions of the cream stations and the creameries of the state have been greatly improved.

THE WEEKLY MENU.

Three Meals You Can Serve to Four Persons for \$1.20.

These three meals cost approximately \$1.20 for a family of four. This is on the supposition that you have to buy everything on the bill of fare. Every time you can use a farm or vacant lot or a back-yard for a grocery you are that much ahead. There are few families that could not make use of this fact to good advantage:

BREAKFAST		
Farina with Dates		Cream
Graham Puffs		Ham Omelet
	Coffee	
DINNER		
Cream of Celery Soup		Croutons
Veal Cutlets		Creamed Potatoes
Fried Parsnips		Tomato Pickles
Parker House Rolls		Butter
White Corn-starch Mold.		Custard Sauce
	Coffee	
SUPPER		
Cheese Soufflé		Hashed Brown Potatoes
Macaroni, Apple, and Nut Salad		
Whole Wheat Bread		Butter
Chocolate Cake		Apple Snow
	Tea	

HOW TO HAVE VINES.

A Very Attractive Addition for Any Back Yard—the Rules.

Vines have an important part in furnishing an attractive home yard. They create graceful, picturesque effects, shade porches, and screen objectionable features. Hardy vines, being semi-tropical, may be transplanted in the fall with little shock. Three-year-old stock is best for quick results. Good drainage is necessary. Vines should not be planted where water from eaves will pour upon them. Water freezing about the roots will kill them.

In planting, dig a hole a foot or more deep and work a good, rich fertilizer into the bottom soil. The plant should be closely covered with earth, well tamped about the roots. Water regularly until cold weather. Protect in freezing weather with a loose covering of straw.

French lilacs should be planted liberally wherever they will serve as a background for lower shrubs or perennials, or in a row along a lane or fence.

The various spiræas are desirable for fall planting. The Anthony Waterer is a fine crimson and the Van Houttei a beautiful white variety. These are especially valuable when grown singly on the lawn.

Tuips, crocus and scillas should be potted and placed out of doors, covered with earth and left until freezing weather, when they should be stored in the cellar like other bulbs.

WHEN THE FLOWERS DIE

SOME COLLEGE WORK THAT SHOWS HOW TO TREAT THE BEDS.

Stirring Up the Soil and Preparing It for Its Winter Sleep—November Precautions That Will Mean Much When Spring Comes.

The flower beds are dreary looking spots. The cannas and the foliage plants and other friends that gave cheerfulness and color to the big stone buildings of the college have disappeared. Wagon loads of crackling leaves from the vines and trees, heaps of yellow, crinkly things, stacks of pale green stems that had borne the nodding heads of pretty flowers through the summer days—all were tossed into piles and burned, and the smoke drifted lazily away over the campus to the hills. Not an annual was left standing, not the stalk of a perennial. They cleared out the whole place. Ordinarily these leaves should be saved and used as a mulch. They are valuable. Here they weren't needed.

PROTECTING FOR WINTER.

The next day along came men with rakes and spades. They cleaned up the bits that were scattered about; they sunk their spades deep into the yielding mold and turned it up, a foot or more of it, to drink in the life-giving air after its long summer's work, and piled it toward the center in a heap so that all the rain or snow of the winter should fall into a trap.

More men trimmed the shrubbery, pruned out the dead wood, cut back and thinned the dense growths, and, wherever necessary, put in new plants. Where perennials, roses and bulbs had been the soil was rounded up to shed water. To neglect this, they said, would be dangerous. For the roses they put down a cover of three or four inches of manure. That was protection enough.

FIXED FOR THE WINTER.

Next came loads of well-rotted manure and wood soil. This was distributed over every deserted flower bed. One or two wheelbarrows of sand were mixed with the soil in these beds because it was too heavy and close. Then they were well soaked. This left the beds in condition for the bulbs that were planted 10 days later. One day a man came along with a long cord fastened to an iron pin. He drove the pin into the center of a bed. At the other end of the cord was a snub-nosed stake. With this the man—wrapping the cord around it until it was the right length—marked out circular little furrows, possibly 6 or 8 inches apart, from the center of the bed to the edge exactly like the ripples a stone makes if thrown into placid water. In these little furrows the bulbs were set about 3 inches apart. Then the fine, friable earth was put over them and they were pressed solidly into place, tucked in, you might say, for the winter. It won't be so very long until these bulbs make root growth. They will bloom in the spring with the first warm sunshine.

Recent experiments at the college prove that sweet peas give excellent results from fall planting in the open ground. Plant late enough to permit seed to lie dormant all winter, say the last of November or the first of December, and they will make an early start in the spring and bloom in May.

SHOT A GOLDEN EAGLE.

A Visitor Seldom Seen Here Was Killed Near Stockdale.

A Golden eagle measuring 7 feet, 2 inches across its outstretched wings was killed near Stockdale last week. Although eagles are rare, some usually are seen at this time of the year in Eastern Kansas. This one was shot by John Samuels, of Stockdale. He brought it to the entomology department of the college to be stuffed and mounted.

A Bust of Dr. Walters.

Frank Clyde Harris, assistant in architecture and drawing, is making a bust of Dr. J. D. Walters. Clay is the material used.

WHO'S WHO IN SPORT.

The Weekly Account of the Students' Athletic Activities.

The Methodists from Baker didn't get off as easily as did the congregationalists from Fairmount the previous week when they hooked up with the Aggies. The score against Baker was 35 to 0. The Methodists had one chance to score. It came in the last period, soon after Croyle had been retired from the game with a badly bruised knee. A forward pass went to Baker on Baker's 34-yard line. Dalton and Counts, the basket-ball star that is playing right end for Baker, pulled off some of the prettiest forward passes seen here this year; the Baker offense showed form for the first time in the game; the combination advanced the ball to the Farmers' 20-yard line. Here the Aggies held. Dalton dropped back for what looked like an easy field goal, but became excited and pushed the ball along the ground instead of raising it over the cross-bar.

Aside from these few minutes the game was too one-sided to create much enthusiasm. The Farmers played loosely and listlessly. The game was the roughest played here this season. Owing to the presence of Coach Stewart and some of the Washburn players in the bleachers, little except straight football was indulged in by Ahearn's protégés. It was one tackle swing and then another, with a line buck by Sims or a run by Croyle occasionally to vary the monotony.

Holmes made the first score in two mighty lunges through the Methodist line, after a characteristic 34-yard run by Christian had placed the oval on the 16-yard line. Croyle missed goal. The first period ended without further excitement.

Croyle came across with two touchdowns the next period, going off tackle 8 yards for the first one, and making the second on a forward pass that netted 25. Bates made good both attempts at goal. Wade was liberal with the penalty brush—67 yards at the first half. Most of them were earned, too.

Sims and Roots each slipped over the line the third period, Roots' touchdown being of the lucky order. Bates again delivered the goods on kicking goals.

Holmes is credited with the remaining touch-down, about the middle of the third period. Croyle and Whipple did good work at getting the ball in striking distance. On the next kick-off Bates and Croyle pulled off a pretty play that gained 50 yards. Bates returned the kick-off ten yards and then passed across the field to Croyle, who tore through to the center of the field before he was downed. His knee was so badly bruised that he had to be helped from the field. Roots was shifted to half, and nearly every sub. on the side-line was in the game long before the period was over. Here is where Baker took a spurt and threw a scare into the Aggie rooters. The rest of the game was without incident.

THE SUMMARY:

Towler R. E. Counts
Roots, Bentley R. T. Baker
Lafin R. G. Preshaw
Seng, Cooley R. G. Xernes
Zoller L. G. Mulvaney
Hammond L. T. Braden, Beeler
Holmes L. E. Capps
Elliot Q. Lewis
Christian, Radcliffe R. H. Dalton, Lowrey
Speer, Vail L. H. Wight, Dalton
Croyle, Roots F. Ewart, Moore
Marxen L. H. Wight, Dalton
Sims, Whipple F. Ewart, Moore
Referee, Wade; umpire and field judge, Briggs; head linesman, Birney. Touch-downs—Holmes 2, Croyle 2, Roots, Sims. Goals from touch-downs—Bates 5. Time of periods—15 minutes.

FAKES AND FORMATIONS.

Baker's coach expressed especial admiration for the work of Elliot at end.

That man Holmes is keeping up to form all the time. He gained almost at will through the Baker line last week—when he wasn't able to find a hole he made one.

Hammond gives promise of being one of the mainstays of the Aggie line next year. He has always played an aggressive game, but the last few games have shown a marked improvement in form. He is not especially heavy, but is learning rapidly how to get the start on his opponent.

There is a big guard on the Baker team by the name of Mulvaney. He proved just about as tough a proposition as Seng and Cooley have been up against this season.

Macomber, the fleet half on the Rolla team, whose playing caused favorable comment in the game here with the Missouri Miners, has been the subject of some lively discussion lately. Missouri University claimed the privilege of drafting him for the K. U. game, on the ground that the School of Mines was a department of the university and that a student could switch from one to the other without having to be "in residence" at the university the year required by the Missouri Valley Conference rules. The matter was ended by President Hill, of M. U., assuring the Jayhawkers that no attempt would be made to play the Miner. At one time some one suggested that Kennedy might draft some of the Aggies to strengthen the ranks of the Kansans on Turkey Day. Two days later another sport writer suggested that it would be a more profitable suggestion to draft the entire Aggie squad, and take along a few of the stars on the K. U. eleven for substitutes.

The Annual Dinner.

Much interest is being manifested in the athletic dinner scheduled for December 10. Last year's affair was one of the big events of the college year, and if the plans of the present committee are carried out the success of this year's dinner will be even greater. An innovation will be the serving of the dinner down town this year. Next time it probably will be in the new gymnasium, which is large enough to seat as many as would care to attend. The accommodations this year are slightly limited. Invitations will be sent to those members of the Athletic Association that signify a desire to be present. The first to notify the committee will be the ones that will get the chance.

The feature of the evening, of course, will be the presentation of monograms to those that have earned them within the past year. Besides this there will be a five-course dinner, speeches, toasts and other things that go to make such an event memorable among the many pleasant memories of college days. Several alumni will be on the program for the evening; several others have signified their intention of coming in for the occasion. Michael Francis Ahearn, of some fame in connection with the development of athletics at the Kansas State Agricultural College, and also known as the real Irish when it comes to presiding at the festive board, has consented to act as toastmaster. Every speaker is thus assured of a warm welcome.

Clifford Carr is chairman of the committee. Requests for invitations for out-of-town alumni and former students should be sent to him or V. V. Detwiler, college post-office.

HOW TO GROW BLUE-GRASS.

The Horticultural Experts Devised a Fertilizer That Gave Results.

Blue-grass has been grown on the campus of the Kansas State Agricultural College for the past two years. The blades of this grass in many instances are from ten to sixteen inches long. A good example is the stretch of campus directly east of Anderson Hall. For years the horticultural department had been trying to get a good stand of blue-grass on this ground but had failed. The highest grade of seed had been drilled in repeatedly and the best possible care had been given it. It was watered in the dry months and covered with manure in the winter, but it would not grow.

This mixture was added to the manure last year: Blood, crushed bone, sulphate of potash, phosphoric acid, and sodium nitrate was put into sacks and allowed to stand until it was decayed. One bushel of it was then added to every wagon load of manure and thoroughly mixed with it. The whole was then spread evenly over the ground. The result exceeded even the fondest expectations of the experimenters. The grass came up in a first-class "stand." Try it.

KEEP A DAIRY RECORD.

IN THIS WAY YOU CAN DETERMINE THE HERD'S VALUE.

Books Make It Possible to Eliminate the Poorest Cows Instead of Feeding Them for a General Average—Building up the Type.

From The Kansas City Star.

"Keeping books on the dairy cow is even more important than the check on the fields of growing crops," said Prof. Crabtree, of the Kansas State Agricultural College, this morning.

"Keep books so that you may find the visitors. If you find one cow is not paying for its feed in the quantity and quality of milk, get rid of it. You can't afford to make the other cows carry it along in the general average."

And here again the value of knowing just what every cow has cost the farmer is apparent. By keeping books on them, he gradually can eliminate all the poorer stock and build up a herd of only the highest grade of milkers. The exact manner and form of bookkeeping can be made to suit the taste or individual requirements of every farm. However, it is essential that an accurate account should be kept of the amount of rough feed for every cow; the amount of concentrated feed, such as corn, and also the amount of labor necessary to take care of the cow. Along with these figures should be kept a record of the production in milk of the cow and the test of this milk for butter fat.

These are the factors most essential for the modern farmer to consider. If he desires to make his farming a business in the truest sense of the word, he also should keep a record on general farm expenses. These, then, can be assessed proportionately against the various factors that go to make up the industries, as it were, of the farm.

CLASSIFYING THE STUDENTS.

A Table Showing How Many Are in the Several Courses.

Here is a table showing the number of students, November 5, in the several courses offered this term, and the details of their classification. In classifying the student, if, at the beginning of the fall term, he has to his credit one-half or more of the studies required of a freshman he is classified as a sophomore; if he is half-way through the sophomore year he is classified as a junior, etc. Classification is not changed in the college year unless the student, by doing extra work, or failing to do full work, alters sufficiently his relation to his course. The information is contributed by J. T. Willard, dean of science.

	Graduate	Senior	Junior	Sophomore	Freshman	Sub-Freshman	Housekeepers	Special	Totals
Agriculture, unclassified	2	22	21	16	7	1	1	1	68
Agromony	3	4	14	5	1	1	1	1	27
Horticulture & Forestry	1	18	26	25	13	1	1	1	82
Animal Husbandry	1	8	12	2	1	1	1	1	23
Dairy Husbandry	1	15	19	9	16	1	1	1	59
Veterinary	1	9	18	21	32	1	1	1	80
Mechanical Engineering	1	27	26	37	45	1	1	1	135
Electrical Engineering	1	21	15	28	26	1	1	1	90
Civil Engineering	1	8	6	16	9	1	1	1	39
Architecture	1	5	1	5	4	1	1	1	15
Printing	1	7	66	103	131	117	138	11	573
Home Economics	1	8	32	23	34	46	10	153	153
General Science	1	1	1	1	1	1	1	1	330
Sub-Freshman	1	1	1	1	1	1	1	1	2
Special	1	1	1	1	1	1	1	1	2
Apprentices (Shop)	1	1	1	1	1	1	1	1	2
Totals	20	235	284	374	412	330	138	34	1827

BIG PRESENTS FOR CHRISTMAS.

The Avery Company Sends the College a Steam Roller and Other Toys.

A steam roller, a large dump wagon and a 10-ton platform wagon—Christmas presents of which to be proud—have been received by the engineering department of the college from the Avery Manufacturing Company, of Peoria, Illinois. Obviously the manufacturers of these big presents don't give away such costly articles every year or to all the colleges. The company knew it was turning out worthy material and it desired to send some samples to an institution at which they were certain to be seen by visitors from every part of the country. So it chose the Kansas State Agricultural College.

DON'T FORGET

—THE—

Farmers' Meetings

Annual Short Course

Boys' corn contests for a week. Five thousand boys took part in the corn contests last year. Several hundred attended the December meeting at the College. More than a hundred girls and women were in the domestic science week's course—a week of bread baking, of cooking and sewing, of sensible talks on household questions.

Something Unusual

and exceptionally good is being arranged. Every farmer who attends the December Institute gathering at the State Agricultural College gets more than his money's worth, and all it costs is your expenses.

Corn Talks

Corn Judging

Watch the papers for the announcement of the program.

MUST HAVE A HONK HONK

MODERN FARMERS FIND MANY USES FOR MOTOR-CARS NOW.

A While Ago It Was Risky to Talk About Them, but 11,000 Cars in Kansas Show Proof of Popular Conversion.

Not many years ago farmers would shoo a man off the place if he mentioned motor-cars.

In 1908 Kansas had about 2,100 motor-cars. Now there are more than 11,000 in the state. Probably two-thirds of these belong to farmers. From eight to ten cars are seen, any day, usually in the forenoon, in most of the towns of Central and Western Kansas. In the so-called Short-Grass country, where the roads are dry and hard, motoring is pleasant and in most cases profitable. The owner of a garage in Rooks County had cars out 362 days last year and complained because the other three days' business was spoiled by snow.

When the farmers' meetings were held, last spring, at the Hays experiment station, farmers were there in motor-cars from Osborne, Rooks, Graham, Ellis, Reno, Ness and Hodgeman Counties. At one time the streets were blockaded with motor-cars.

"There goes the 'down-trodden' farmers," said a banker of Hays, when he saw a line of agriculturists speeding homeward at night after the institute lectures. "The 'down-trodden' farmer is enjoying life, while two-thirds of his city brothers have to hustle to get shoes, and walk or pay car fare."

But the farmers of Kansas use their motor-cars for more than social pleasure and trips to town for groceries. They provide the power to stretch and hold fence wire, to stack alfalfa or other hay—where hooks and a crane are used. A butcher in Jetmore, Hodgeman County, uses his motor-car to pull up the carcasses of beeves and hold them in position until cleaned.

The steam roller is 22 horsepower. It rolls a strip 124 inches wide. The front roller measures 70 inches and each of the two rear rollers 27 inches. The two big wagons have wheels with tires 12 inches wide and will carry a heavy load without injury to a road. The Avery Manufacturing Company also has shipped to the college—as a present—a derrick and steam shovel, just for full measure.

FARM OR THE CITY—WHICH?

A Few Words From a Student on the Old, Old Problem.

The student body of the Kansas State Agricultural College furnishes an excellent opportunity to study the question of "Farm Life Versus City Life." A large percentage of the students enrolled in the college came from farms. Long before they thought of going to college they had made up their minds that when they were big enough they would move to town. They made all their plans and had all their dreams in line with that idea. Finally when they did enter college they chose some course that would enable them to live in town.

But many of the boys that come to college with just such ideas change their minds, some sooner than others. Frequently a young man enters college with the intention of taking a course in engineering. He is tired of farm life. He has about two years of preparatory work to do before he can begin taking the regular engineering work, and in this interval he changes his mind, or is very likely to do so, concerning the comparative pleasure of farm and city life.

A census of the students of the Kansas State Agricultural College probably would show that few of the students from the farms come with the intention of taking an agricultural course. After they have spent a year or two in town they are better able to judge things. They have had an opportunity of observing what city life really is.

THE KANSAS INDUSTRIALIST

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Number 10

BURN THE CHINCH-BUGS.

NOW'S THE TIME TO DESTROY THEM IN THEIR WINTER HOMES.

In Ellis and Sumner Counties the War with Fire Against the Wheat and Corn Pests Began About Two Weeks Ago.

If chinch-bugs do much injury to wheat or corn next year their operations will not be very extensive in the counties of Ellis and Sumner. Down there the farmers, led by the entomologist, the bug expert, Dr. T. J. Headlee, of the State Agricultural College, are burning off the bunch-grass. At Conway Springs, in Sumner County, the grass for many miles has been burned off in the last ten days, and in Ellis County land included in the Hays experiment station and farms adjoining have been burned.

This is the time for every farmer to clear up the bunch-grass—the winter quarters of the bugs. Probably 75 per cent of the chinch-bug family has been destroyed in the counties mentioned where intelligent burning has been practised. Even if the fire didn't get them, their homes were ruined, the tops burned—the roofs taken off—so that the cold weather will finish the job. The fire, it is declared, will not seriously injure the next year's grass growth.

CLUMP GRASS THE PLACE.

The current belief that the bugs pass the winter among the corn-stalks, straw stacks and heaps of rubbish about the farms is not borne out by investigations. When the bugs are abundant no place covered with vegetation is wholly free from them, but the threatening mass of bugs is to be found in clumps of bunch-grass and among bluestem in pastures and mown meadows, along roadsides of highways and railroads and in neglected corners of cultivated fields. Few bugs were found hibernating in fields covered with crab-grass or fox-tail, and not many wintering in the corn fields or in hedgerows that are devoid of native clump-forming grasses. In the meadows from which the native prairie hay has been mown great numbers of the bugs may be found tucked away about the roots of the grass or hiding behind the leaf sheaths of the stubble of bluestem. A single clump of this grass eight inches in diameter growing on a roadside bordered by a corn field was found to contain twenty thousand chinch-bugs.

BURN IT DOWN CLOSELY.

Close burning is of the utmost importance. When the bunch-grass is burned to within one inch of the crown, unless the fire is exceptionally hot, very few bugs are killed. But when the clump is consumed to within one-half inch of the crown about 100 per cent of the bugs are destroyed.

The situation of the hibernating bugs offers the farmer an excellent opportunity to attack them. To do this it will be necessary to run fire over all pastures, meadows, roadsides and neglected places where native grasses abound. Since the chinch-bugs fly from their winter quarters into the wheat in the spring, this attack, if it is to be of the greatest efficiency, must be made by all the farmers or landowners over a continuous and extended area.

The best time to make this general burning would be just before winter sets in, in order that those bugs escaping might be forced to pass the winter without protection. The burning should be started as soon as the grass in which the bugs are hibernating becomes dry enough to burn down close to the ground. The attack on the bug should not be delayed until spring, unless conditions should render it impossible to make it during the winter. The number of bugs hibernating in the corn fields does not seem

to warrant the burning of the stalks. Stalks and other litter should be plowed under in the fall or winter.

Another matter that calls for consideration is the widespread and erroneous belief that if the chinch-bugs become dangerous next year, they can, regardless of weather conditions, be controlled by the introduction of a fungus disease among them. Investigations show that this fungus, though present among the bugs, will not control them except as the weather conditions are exceptionally favorable to its growth.

THE ANSWER: LIVE STOCK.

An Agricultural Student Tells How Fertility May Be Increased.

Mistreated farms can be returned to their past fertility, and in many cases made more productive, by the farmer keeping more live stock. No quicker method of reclaiming "worn-out" land is known than by turning it into a purely live stock farm.

Many of the present-day farmers that own ordinary farms are moving to town and renting their farms to tenants. The majority of tenants rent the farm for only one year and then move to some other farm. They get out of the land all they can and look at it from the light of their own selfish interest.

It is not impossible to keep a farm from "running down" in the absence of live stock; but it would require much more efficient farming than can be expected of the ordinary tenant. Live stock will quickly rebuild depleted farms, if the stock is properly handled and the manure evenly spread upon the land. The high prices that market and breeding classes of animals have reached in the last two years has made it almost as profitable to rear and sell live stock as to raise grain. The experienced lecturers of the Kansas State Agricultural College extension department constantly urge farmers to increase their live stock possessions and feed more products at home.

In speaking of the deserted farm, Secretary Wilson says: "The principal factor in the downward course of soil deterioration is its desertion by the owner and its occupancy by tenants who have no domestic animals and no money with which to buy them, and who grow grain to sell."

It is not necessary for farmers to quit growing grains and start an exclusive stock farm, to maintain fertility in the soil. But it would be best for the farmers of Kansas to turn at least one-third of their time to stock breeding. This method would raise the fertility of the land above its present standard and also be a profitable investment.

POWDER USED ON DOBE SOIL.

196 Holes to the Acre Gives the Land a Thorough Shaking.

It doesn't take long to tear an acre to pieces with the powder system now being used in dobe lands. A demonstration a few days ago, on the college farm showed how thoroughly the ground was broken up. Whether the process is to be successful is still to be proved. E. R. Angast, representing the Dupont Powder Company, has charge of the work now being done. In ground to be used for an orchard Mr. Angast had holes bored—196 to the acre—15 feet apart. The charges put into these were connected with wires. Three rows, about 12 or 15 charges, were fired at one time. The tough adobe was cracked from hole to hole; large pieces rose 25 or 30 feet into the air. The ground was in fairly good condition to plow, but it will be even better after frost has laid its softening influence upon it.

It costs about \$15 an acre for the powder and possibly \$2.50 or \$2.75 for the labor.

WATCH FOR SILO GAS.

LEAVE THE UPPER DOORS OPEN WHEN FILLING—DANGER THERE.

A Continuation of Prof. Wheeler's Interesting Talks on Silage—How to Feed to Get the Best Results—Feeding in the Open.

Another thing about silos: Be careful in filling them. Says Wallace's Farmer:

"If for any reason the silo is partly filled and then shut up for a day or two, the mass of green corn will ferment and give off carbon dioxide. This is heavier than air. A man descending in this carbonic acid gas is in very serious danger of suffocation.

The doors at the top should be opened to let out the gas. Lower a lighted candle or lantern. If it is extinguished don't go in.

THE AVERAGE DAILY FEED.

Experiments indicate that silage may profitably be used at the average rate of from 15 to 20 pounds a head daily for full steers, 2 or 3 pounds a steer daily of cottonseed-meal being added to properly balance the ration. Most of the steer feeders in Kansas use alfalfa as the roughage ration for full feeding steers. The use of these amounts of silage will necessarily reduce the amount of alfalfa consumed, leaving the ration somewhat unbalanced from a protein standpoint. Consequently, the addition of the cottonseed-meal or cake is required to get the best results. Where these quantities of silage are fed in connection with some alfalfa the steers may be inclined to become too loose, a condition that can be easily corrected by supplying some cheap, dry roughage, straw, corn or kafir stover. The feeding of the grain with the silage will be found to be the most desirable practice. The grain becomes mingled more or less with the silage, consequently is eaten more slowly and enters the paunch with the silage, which will conduce to more perfect digestion of the grain portion of the ration. Where a palatable, dry roughage, such as alfalfa, is supplied in addition it should not be given too closely following the silage and grain.

KEEP SOME ROUGHAGE HANDY.

Where the method of half feeding through the winter and finishing on grass is practiced 30 or 40 pounds of silage may profitably be fed, with the addition of a small quantity of cottonseed-meal or cake properly to balance the ration. A little cheap, dry roughage kept in racks would be desirable with this system of feeding.

To prevent the silage from spoiling as it is being fed it is necessary to remove and feed daily at the rate of one and one-half to two inches in depth from the whole surface. Care must be taken not to dig up the surface. It should be kept as nearly level as possible. A rake made from a fork by bending the tines at right angles is a convenient tool to use in removing silage for feeding. For complete details concerning the capacity of silos, weight of silage, etc., farmers should read the pamphlet issued by the extension department of the Kansas State Agricultural College entitled "Silage and Silo Construction," pages 47-50.

It will be noted that the silage is much heavier at the bottom of the silo than at the top, a cubic foot of silage at the bottom of a 30-foot silo weighing 56.4 pounds, while the surface foot weighs but 18.7 pounds. About the same amount of silage is contained in the bottom 11 feet of a 30-foot silo as in the upper 19 feet, or, in other words, half the silage is contained in the lower third of the silo. This must be taken into consideration in feeding, as an inch removed from the surface toward the bottom takes out considerably more in weight than an inch removed nearer the top.

At the Pennsylvania station direct comparisons were made of light and heavy silage rations in connection with corn and cottonseed-meal, the maximum amount of silage fed being 20 pounds. From a standpoint of profit the heavy silage ration had the advantage, owing to the reduction in the amount of grain required to produce a given amount of gain. Some dry roughage was given, in addition, to both lots. Tests have shown that for full feeding, at least, an ordinary open shed is a better means of sheltering silage-fed cattle than a warm basement barn.

HOW TO JUDGE CORN.

A Feature of the State Farmers' Institute this Month.

One of the main features of the State Farmers' Institute to be held at the Kansas State Agricultural College from December 26-31 will be the corn judging. The corn will be judged from two viewpoints or standards—the "trueness to type or breed characteristics" and "general quality as related to yield, feeding value, and vitality of seed."

Every breed of corn has some characteristics that distinguish it from any of the other breeds. If these characteristics are not well developed the ear cannot be scored as perfect, even if for another breed of corn it would score the full number of points.

In scoring an ear of corn the trueness to type counts 40 points. Trueness to type is judged by the shape and size of the ear, the color of the grain and the cob, and the uniformity of the kernels. The proportion of corn to cob counts 35 points and is judged by the extent to which the ends of the ear are filled out, the shape and depth of the kernels, and the space between the rows. The judge has no definite rule for judging the composition and feeding value. This counts 10 points and is determined by a comparison of the amount of germ, horny layer, and white, starchy portion. The larger the proportion of germ and horny layer, the greater the feeding value. The market condition and value for seed counts 15 points. In determining this the judge must take into consideration the size of the germ, firmness on the cob, brightness, maturity, etc., and the soundness of the kernels and the injury by mice, worms and otherwise.

All men and boys who attend the institute to be held at the college during the Christmas vacation will be taught to use this system of judging corn, and will have some of the best corn in the state on which to practice.

MONEY FROM SOME WEEDS.

Medicine is Made from Many, but the Prices are Low.

Any weeds on your place? One year's seeding, the old farm proverb says, is seven years' weeding. Better get busy and do something. The big stick in the weed industry is to prevent the seeding—no royal road, no easy task, but mighty important to every farmer. You just have to get down and work hard if once you get a fine stand of weeds. Watch all your seed, know it is clean; send it to the Kansas State Agricultural College, department of botany, if necessary and have it analyzed.

Of course if you're going into the weed business it's different. Some of the most noxious weeds that thrive to-day are the sources of crude drugs now obtained wholly or in part from abroad. The plants from which medicines are made, burdock, dandelion, couch-grass, pokeweed, tansy, catnip, jimson-weed, etc., can be collected and sold as crude drugs. The prices paid are not high. Yet, if in getting rid of weeds and thus increasing the value of the land the farmer can make the weed a source of a small income instead of a loss, it isn't a poor idea after all.

COULD HELP WHEAT, TOO

THE CORN ASSOCIATION, PROF. JARDINE SAYS, SHOULD BE BROADER.

A Suggestion that the Name Be Changed to Let in Other Grains that Could Be Improved as Corn Has Been.

Why should not wheat and oats and other grains be represented in the Kansas Corn Breeders' Association? If this association improved the corn varieties of the state—and it certainly did just that—why could it not do the same good work for the wheat? And why shouldn't it be called the Kansas Grain Breeders' Association?

The foregoing suggestions are contained in a letter sent out this week by W. M. Jardine, head of the agronomy department in the Kansas State Agricultural College. Prof. Jardine's letter is important; here it is:

"The sixth annual session of the Kansas Corn Breeders' Association will be held December 28, 29 and 30, at the agricultural college at Manhattan. This is an event in which every farmer interested in the production of larger acre yields of high-grade corn should participate.

IT HELPED CORN.

"The association was organized by the farmers of this state to promote the corn industry through the production of pedigreed varieties of high-yielding power and high-standard quality, and to encourage interest in their growing and distributing. The value of such an organization already has been demonstrated, not only in this state but in other states also, as an instrument through which such results can be obtained.

"Nearly every corn grower in Kansas is more or less interested, also, or should be, in other grain crops. Kansas, in addition to its producing 154 million bushels of corn, produces approximately 87 million bushels of wheat, 27 million bushels of oats, and many million bushels of other miscellaneous grain crops. It has been sufficiently demonstrated that the grain crops of various kinds are adapted to Kansas conditions, but they all need improvement.

"If the Corn Breeders' Association has been instrumental in purifying the corn varieties and bringing larger yields, would it not be possible to extend its influence a little further and include all the grain crops of Kansas, especially wheat? Have you ever thought about this? Could it not also be made equally effective to produce better wheat, oats, barley, etc., without lessening its value as a corn organization?

TAKE IN OTHER GRAINS.

"In a way, the Corn Breeders' Association—which conducts a corn show—is affiliated with the National Corn Show, in that only such samples as have been passed upon and approved by the state organization are eligible to entry at the National Corn Show. Would it not be desirable, therefore, to include in the Kansas Corn Breeders' Association such crops as wheat, oats, barley and other small grain crops, and call the organization the Kansas Grain Breeders' Association, or some similar name?

"We ask every member of the Corn Breeders' Association, as well as other farmers interested in grain production, to consider this matter. As many as possible should attend the sixth annual meeting at the agricultural college next month. The agronomy department would be glad to hear from any interested persons regarding the question. The Association considered it at its last meeting.

"The grain growers of Kansas should organize themselves into an association standing for the promotion of all grain crops. Let us perfect such an organization before the beginning of another year."

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THE ALUMNI CAN HELP.

The suggestion of the *Manhattan Mercury* that the alumni association of the Kansas State Agricultural College should interest its members in behalf of the college should receive immediate consideration. Every graduate can properly constitute himself an agent of information and see to it that legislators, sitting for the first time in the forthcoming session in January, are carefully and intelligently informed as to the great work the college has done, is doing, and desires to do. It is not a reflection upon the acumen of the legislators to say that many of them may have only a superficial knowledge of how immeasurably important it is for the state to have every item upon the program provided for in the appropriation that the legislature will be called upon to make. The farmers in the 105 counties of the state are only too likely to overlook the opportunity—as are two-thirds of the voters in cities—to use their influence in behalf of the institution with which their own future prosperity is so closely allied. This is not indifference. Too often it is only forgetfulness.

It is distinctly regrettable that any especially active propaganda should be necessary to obtain for the college the very fullest possible support of every member of the legislature. But this situation is certain to arise, and the earnest efforts of every alumnus, in every part of the state, should be devoted to meeting it. The young men and the women—and the early-day alumni, also—are competent to speak understandingly of the college and its work. They know, as no one else knows, except, perhaps, the officers and faculty, how earnestly every department of the college is conducted to do its full part in improving the state's standard of agriculture and in imparting the most practicable—which means the most immediately useful—education to the state's boys and girls. They know, thoroughly, how the college is realizing its highest possible relation to the people; that its agents are laboring constantly in every part of the state to develop the best ideals in farming and in home economics, and in every other department, properly and consistently its duty to develop. The alumni members know these things. They should see to it that every legislator knows them also. The biggest asset the college has is its alumni. It has a right to expect its support.

CINCINNATUS AND MR. BRYAN.

The names of two great men, Cincinnati and William Jennings Bryan, will go tumbling down through history together for the bad example they set for farmers. Cincinnati left his plow in the field to run for the senate in the 'Steenth Congressional District of Italy. He carried every ward in Rome except one or two, and these were peopled by men who are said to have resented his carelessness with respect to his plow. It hurt Cincinnati a lot with the best elements. Every farmers' institute in Rome worked against him the next time he ran and worked so effectively that he lost Sarsini and Rimini and got down to the Rubicon with his majority greatly reduced. All because of leaving that plow out in the weather. History says so.

But still farmers continue to neglect

their implements. On one large farm, a few days ago, three reapers, two mowers, four horse rakes, several plows and a lot of harrows were seen in one lot, discarded—junk! That machinery was junk because the farmer didn't have the gumption and the common sense to build a forty-dollar shed to care for it.

That sort of neglect doesn't help the implement trust. Not much. Farmers that treat their machinery in this way will be too poor to buy more, and no careful business man should trust them.

W. J. Bryan made the same fatal error once, in one of his runs for the Presidency. The call of his country, if W. J. told the truth—and who shall dare?—reached him while he was plowing at Fairview, his beautiful country home near Lincoln. "I have left my plow in the furrow," said the Peerless One, "to respond to the call a third time."

O, fatal admission! Why pile it on? Every sensible farmer knows that W. J. was beaten because of that plow, because any farmer that would use his machinery in that fashion could not be trusted with the nation's future. It beat Mr. Bryan.

WHY KANSAS GAINED.

Why should anyone be surprised because this great and rampantly glorious state of Kansas shows up at the Potomac with a gain of more than 200,000 population in ten years? Was there any reason to suspect that Kansas would be among the "also rans?" Did Missouri, for instance, suppose that Kansas had been standing idly around twiddling its metaphorical thumbs during the last decade?

Why should not Kansas exceed its record of gain in the previous ten years, and who shall say that in the next ten it may not slip over another three hundred thousand increase? Go to Missouri, Iowa and Indiana and also a few more in the enervating East, but keep your eyes upon Kansas.

A gain of 15 per cent! Forsooth and also gadzooks! Kansas will go that 15 per cent better in 1920 if the rural communities, meaning especially and particularly the farmers, realize that the state's future depends upon the intelligence of its agriculturists, upon modern, scientific tilling of the soil; upon conservation of fertility, "rational rotation," some one has called it; upon keeping the state's plant-food inside the state's boundaries; upon better dairying and more of it; silos to stop the wasting of a third of the state's corn crop; in short, upon the things for which the state's agricultural college has been pleading and lecturing for years. Those are the things, the forces that have made Kansas go ahead. Why not tell about it?

And now, if every farmer will please get back to his own land and attend to it instead of leaving that duty to tenants, the state will have more good roads and more modern farm homes and more happy women and children in spots that now show straggling fences, ungraded and undrugged and untouched highways, large acreages and dwindling yields, and the other lamentable drawbacks inevitably a part of a landlord system.

Kansas has thousands of farm homes filled with smiling faces, but they are faces that smile across their own acres. No doubt a few rural counties in the state will show a decrease in population, but where that is true an investigation will develop reasons not connected with the disturbing "cityward" tendency. Some Kansas boys and a few Kansas girls, doubtless, have gone into the great centers of population to suffer or succeed—the cities must draw upon the farms for their strength as they draw upon them for their food. A whole lot of the energy, the "get there" spirit of some cities and states not a thousand miles away would be as dead as a certain political party's chances in the next legislature if Kansas kept all its boys and girls.

The horny-handed farmer is working for his sheep while his son works for his sheepskin.

A FARM BOY'S OPINION.

Not all the boys reared on the farm will become farmers. Some naturally are better fitted to become preachers, doctors, lawyers, or business men. Neither will all the girls brought up on the farms become farmers' wives. Some will be musicians, artists or teachers, or take office work.

It would be unwise to try to hold such young people on the farm. Should they be required to remain they would settle down into a stupid uninteresting life. Many leading professional men, business men and statesmen have come from the farms, and their places in professional and business life must sometime be filled by others whose talent and ability lead in a similar direction. Were it not for the influx of country blood the city with its business and professional life would soon decay.

But many a boy is virtually driven away from the farm by an unthinking father. He learns to hate the farm by being over worked and allowed no share in the proceeds, the father's sole object, seemingly, being to grow more crops to feed more stock to buy more land to grow more crops.

The boy works from twelve to sixteen hours a day. Soon he realizes that he, with his father and brothers, are slaves and his mother and sisters drudges. They have no time for lawns and trees and flowers and easy buggies or motors.

The father does not read the farm papers. He scoffs at his boys for their interest in the modern farm journals. If there is a farm paper in the home it is there because the boy has subscribed for it himself; the father has no use for "book farmin'."

Perhaps the father or a friend gives the boy a pig or a calf or colt. When grown it is sold, and father pockets the money. "Johnny's pig but dad's hog" has widened the breach between many a father and his son. The boy hates the injustice of such a deal and determines to go for himself at the earliest opportunity.

The inborn desire of every human being for association with others takes the boy at once to the town or city. He has heard or read of the glitter and fascination of the city. He believes work at good pay is plentiful. What becomes of him there may never be known.

Many writers and economists deplore the "cityward" trend of farm young people, but there is no real cause for alarm. As the young people obtain an education and learn of the wonderful developments in agricultural science there is an increasing sentiment in favor of country life. The "back to the soil" movement is steadily gaining momentum. Before the passing of another decade there will be a complete reversal of the "cityward" movement.

Make the farm home a pleasant place, share the management and proceeds with the boys and girls, and you will have no trouble in keeping them.

BASEBALL STORIES POPULAR.

A Magazine for November Shows What the People Read.

Did you ever notice what articles are the most read in the magazines? A glance over a month-old magazine will give a good idea as to what interests reading public. Take *The American Magazine* for November. The first article is an able one by Ray Stannard Baker on "The Political Firing Line." Several passages were underscored. The pages showed other marks of having been read. A new serial and several articles on "Interesting People" evidently had not taken the popular fancy. The pages were as crisp and white as on the date of publication. A short story, "The Singing Gates," showed several signs of having found interested readers. The pages were thumb-marked; their corners were soiled and worn thin. Somebody was enough taken with the story to tell his friend about it, and the news must have spread through quite a circle of library patrons. An article on the tariff, by as able a writer as Ida Tarbell, was practically uninjured. The public may wish for tariff revision, but evidently the magazine readers that get

their reading at the public library do not care to read about the iniquities of the protector of the American laborer. The article that had been read, and thumbed over, and that showed all the evidences of rough usage, was not a love story, or a political story, or a dissertation on the evils of drink, but bore the title "Seeking the .300 Hitter," by Hugh Fullerton. These pages were soiled and limp; the upper corners were worn through. When opened at random the magazine fell open at these pages. For is baseball not the national sport? And is not a .300 hitter the monarch of all he surveys?

A Golden Text.

But this I say: He that soweth sparingly shall reap also sparingly; and he that soweth bountifully shall reap also bountifully. —II Cor. 9:6.

DOWN WITH THE GOPHER.

An Appetizing Syrup to Kill It Is Prepared at the College.

There isn't a worse sneak-thief today on the farm than the pocket-gopher. And about the only way to kill him, the best way, is to feed him corn dipped in a syrup prepared and sent out by the Kansas State Agricultural College. This syrup is made up chiefly of strychnine and cyanide of potassium. The experiment station sells it at cost, \$1.10 a quart can.

Gophers are the most destructive little beasts in the land, and they have been increasing in numbers amazingly in the last few years. Very little is known about them, too. They are so wise that few persons ever have seen the little ones—the offspring. The average family is believed to number from four to six members, and the gopher stork is supposed to visit the homes of Gophertown only once a year.

The gopher seldom leaves its burrow except at night. These burrows are usually eight or ten inches beneath the surface. The gopher is always at work. It ceases its tunnelling only when the ground is frozen too hard for digging.

The principal food of the pocket-gopher is the roots, tubers and underground stems which it finds in its burrowing. These it often cuts up in short lengths and drags to an enlarged room or hole where it stores them for future use. The pockets of a gopher are used for bringing food and not for carrying dirt. These pockets are in both sides of its head, along the jaws. The gopher has very few animal enemies. Those most destructive to it are the owl, the weasel, the Bull snake, the striped skunk, and the cat.

Not Going Home.

The Phillips County Post.

He'll not go home this year, alas! to where the old folks are, to gaze across the withered grass upon the hills afar; he will not clamber from the train with bosom thrilled with joy, to hear the glad words once again, "Ah, welcome home, my boy!"

Ah, yes, the old home stands to-day just as it did of yore, and oftentimes his thoughts will stray back to the big front door, and he will muse upon the times when he hailed it as home, when he sojourned in foreign climes or beat across the foam.

He'll not go home this year, although the old folks still are there, although the songs of long ago still echo free and fair; he'll eat Thanksgiving dinner here, and not go home, alas, because the laws are strict this year and he can't get a pass.

How About This?

Freshman (viewing the work on the new west extension to the city railway)—"Is the extension department building this line?"

Senior—"No, little one, it is just the result of a mix-up in the Manhattan City and Interurban. West has been running the line, but things have changed lately and the line is going to run west."

Failure.

What is a failure? It's only a spur To a man who receives it right. And it makes the spirit within him stir To go in once more and fight. If you never have failed it's an even guess. You never have won a high success. What is a miss? It's a practice shot Which we often must make to enter The list of those who can hit the spot Of the bull's eye in the center. If you never have sent your bullet wide, You never have put a mark inside. What is a knock-down? A count of ten Which a man may take for a rest. It will give him a chance to come up again And do his particular best. If you never have more than met your match, I guess you never have toed the scratch.

—Edmund Vance Cook.

SUNFLOWERS.

A dead truth is better than a live falsehood.

The only man who can not afford to advertise his trade is the criminal.

Paid local in a town paper: "Saw filing at the Peerless bakery. d-lm*."

Post-card showers are the latest annoyance to interfere with the development of the New Ruralism.

Envy is ignorance, and usually exists in wanting what you never earned and what you are not competent to possess.

The merchant that displays the same old stock should not complain if trade goes where the offerings are more attractive.

Some men never look high enough to see second story signs. But they can detect a nickel edgewise in a sand-bank two miles away.

Don't kick about the stream not flowing your way. Remember, live fish swim up-stream. The dead ones float along with the tide.

A. Cobb, living near White City, the *Register* says, has finished his husking and gone to Caldwell County, Missouri, visiting. Here's looking at you, kernel.

What would Joe Shannon say of this item from the *Mound Valley Journal*? "The A. H. T. A. boys brought down 333 rabbits last Saturday." And no election out there, either.

College girls that go to parties six nights a week and reach the class room next morning with their shoes only half buttoned will never injure their eyesight looking for work.

The Olathe *Mirror* has an advertising solicitor who will do well if only the birth rate continues active. Shortly after a 10-pound girl arrived at the home of W. H. Blankenbaker, a few days ago, the solicitor "talked him out of" a half-page ad and 1,000 bills.

"C. L. Elgin," says a Cowley County paper, "was awakened from his just sleep Sunday morning by burglars. He hastened down stairs, fell over a chair in the parlor and treed his man in a clothes closet." Can it be that Mr. Elgin had shoe trees in his closet?

Society notes in the *Mound Valley Journal's* suburban correspondence: Flossie White Sundayed with Elsie Huff, who was sick with chicken-pox. —Sam Green has a sick colt. —Mr. Lush is hauling coal this week. —Mable Huff won the 42-piece dinner set at Martin's.

In accordance with custom it was the intention to have a December poem in this issue. But all the December poems found in a day's search told of snow and ice and mittens and skating. With summer weather prevailing "as we go to press" this sort of verses obviously would not be suitable in Kansas.

This story shows the need of the training boys receive in the Kansas State Agricultural College: A youth in one of Prof. Dickens' classes in fruit culture was asked to name all the varieties of apples he knew. After some hesitation he replied that he could think of only two: Ben Davis and "Windfalls."

A country exchange demands to be informed why no home contains a motto "God Bless our Dad," or "What is Home Without a Father?" The principal reason is that nine times in ten father gets home with a grouch about the cost of high living and barks at everyone that touches the butter on the tea table. Father, Mr. Editor, lives in music as the hero of the touching little classic, "Father, dear father, come home with me now."

ALUMNI NOTES.

George G. Menke, '98, is at home with his parents in Garden City, Kansas.

Miss Laura G. Day, '93, has returned to Manhattan after several months travel in western states.

Mrs. Bertha (Bacheller) Foster, '88, of Maplehill, Kansas, is the guest of Mrs. Bertha (Kimball) Dickens, '90, this week.

Mrs. Mayme (Alexander) Boyd, '02, and small son spent Thanksgiving week with Mrs. Boyd's parents in Manhattan.

F. W. Wilson, '05, with Mrs. Wilson and their two sons, are visiting in Manhattan. Mr. Wilson is professor of animal husbandry in the University of Arizona.

A son was born, November 24, to E. W. Kimball, '02, and Marjorie (Russell) Kimball. Mrs. Kimball was a teacher in the domestic science department for several years.

R. A. Oakley, '03, assistant agrostologist in the department of agriculture, Washington, D. C., has been spending his vacation in Kansas and timed his visit at the college so as to take in the Thanksgiving football game.

Dr. O. A. Stingley, '96, spent Thanksgiving week with the home folks in Manhattan. Dr. Stingley is in the employ of the United States department of agriculture as veterinary inspector, with headquarters at Kansas City, Missouri.

Harry Umberger, '05, visited the college recently on his way to Washington, D. C., where he will spend the winter. Mr. Umberger is in charge of cooperative experiment station work at Moro, Oregon, under the direction of M. A. Carleton, '87.

C. D. McCauley, '96, after a dozen years of prosperous farming near Fowler, Kansas, has contracted gold fever and is working a very promising claim near Llano, Sonora, Mexico. Mr. McCauley visited the college two or three days before leaving for Mexico.

Orville B. Whipple, '04, and Prof. Wendell Paddock are joint authors of a recently published book on "Fruit Growing in Arid Regions." Mr. Paddock is professor of horticulture and Mr. Whipple field horticulturist in the Colorado Agricultural College and experiment station.

Mrs. B. M. Wharton announces the engagement of her daughter, Lura Angeline, to Mr. John Willard Calvin, the wedding to take place the last of December. Mr. Calvin has a position in the chemical department of the State Agricultural College, and he and his bride will make their home in Manhattan.—*Topeka Daily State Journal*. Mr. Calvin was graduated with the class of 1906.

J. W. Adams, '98, superintendent of the plains sub-station of the Colorado agricultural experiment station at Cheyenne-Wells, made a short visit to the college recently. Mr. Adams was on the way to Eastern Kansas to select the foundation stock for a dairy herd to be established at the sub-station. He states that the character of the last season brought out very strongly the great difference in crop yields in his region, depending upon whether or not proper methods of agriculture were employed, such as result in a conservation of the moisture of the soil.

E. H. Webster, dean of agriculture, while in Washington, D. C., attending the association of agricultural colleges and experiment stations, found in the Maryland Agricultural College four K. S. A. C. graduates. J. B. S. Norton, '96, is professor of botany and vegetable pathology and also state pathologist. He is doing very important work along the line of fruit diseases. Prof. Norton has been there for a number of years. Nickolas Schmitz, '04, is agronomist at the Maryland experiment station and is showing the farmers of the East how to grow alfalfa and how to use modern machinery. Arthur B. Gahan, '03, is assistant entomologist, and Walter R. Ballard, '05, is assistant horticulturist at the station. L. M. Peairs,

'05, formerly assistant state entomologist at the Maryland station, is now an instructor in his alma mater. Prof. Webster says that all these men are doing excellent work and are well liked. The influence of the Kansas State Agricultural College is bound to spread into the four quarters.

Vance-Kiene.

Frederic Arthur Kiene, '06, and Miss Mary Elizabeth Vance were married at Manhattan, November 29, at the home of James Rannels, an uncle of the bride. Mr. and Mrs. Kiene will be at home at 737 South Judson Street, Fort Scott, Kansas. Mr. Kiene is agriculturist for the Fort Scott Sugar and Syrup Refining Company.

Elliot-Wolf.

George D. Wolf, '05, and Miss Ruth Ellen Elliot, '10, were married November 30 at the home of the bride's parents, Mr. and Mrs. John Elliot, of Manhattan. Mr. Wolf is employed by the Duplex Metals Company as traveling engineer. After an extended trip through the West and South, Mr. and Mrs. Wolf will be at home at 1135 LaSalle Avenue, Chicago.

LOCAL NOTES.

C. A. Scott, state forester, is out on a two-weeks institute trip on the lines of the Union Pacific in the western part of the state.

President Waters and Prof. Charles Dillon were in Chicago this week attending the International Stock Show and other meetings of agricultural nature.

J. H. Miller, superintendent of the farmers' institute and college extension department, was in Wichita Friday and Saturday of last week attending the Southwestern Teachers' Association.

J. D. Rickman, superintendent of the school of printing, went to Kansas City last Tuesday to engage a pressman to fill the vacancy caused by the resignation of L. B. Strickrott. Mr. Strickrott has accepted a position, similar to the one he held here, in the government printing-office.

Ralph R. Price, professor of history and civics, will lead the mid-week services of the Y. W. C. A. next Thursday evening at the United Presbyterian Church. His talk will close the series on "College Girls' Duties" that have proven so popular. Professor Price will discuss the "College Girl's Duty to Her God."

F. G. Campbell, junior here in 1909, arrived in Manhattan Monday. Mr. Campbell was a student in the civil engineering course, but dropped out of school last spring in order to take a position in California with a railroad surveying gang. He spent some time in the southern part of California and for the past few months has been in Utah. Mr. Campbell will re-enter college after Christmas and complete his course.

The Athletic Association met last Tuesday and voted to postpone the athletic dinner. When the banquet was given last year it was hoped that it could be made an annual affair, but the sentiment of those interested seems to be against having any this year. The matter may be taken up again next term, but the present indications are that the present season, the most successful in college history, has passed by without any sort of celebration—unless the Rooters' Club parade on Thanksgiving day could be considered as such.

Not enough attention is paid to music in the public schools, said Olof Valley, professor of music, in assembly Tuesday. The study of music should not be neglected. For music, says Professor Valley, is a great home tie. It is a deplorable fact that comparatively few persons can sing the national airs. In the public schools of Europe as much attention is paid to music as to any other subject. In the eastern part of the United States progress has been made along this line, but the west, progressive in so many things, is neglecting this important work.

ALFALFA IN TEST BEDS.

PURE-BRED PLANTS IN THE GREENHOUSES FOR OBSERVATION.

A Student Writer Shows How to Feature the Attractive Side of a Prosaic Subject—Extensive Field Tests With Many Races.

From the Students' Herald.

Did you ever see alfalfa growing in a greenhouse? Did you ever see two alfalfa plants growing side by side, each of which was a member of a pure-bred alfalfa race? Did you know that the college is conducting some of the most extensive alfalfa breeding work in this country? Did you know that one whole section of the old greenhouse and a great many field plots are used in this work?

In this section of the greenhouse the botanical department has hundreds of races of alfalfa growing in pots and in small plots. Many of the plantings have been made recently. The plants are now several inches high. Most of these plants were obtained from cuttings made during the last summer. They will be grown in the greenhouse and set out in the field plots in the spring.

Some extensive field tests are being carried out. About fifty propagation rows were started last summer. These are rows planted to seed of one pure-bred race. They are short to begin with, but are increased in length as soon as possible by cuttings taken from the alfalfa stems. When a sufficient amount of seed is obtained the field plots of one-fourth acre are started. The field tests are conducted on these plots. When the plots have increased in size so that a surplus of seed is obtained it will be distributed to the farmers of the state.

The work has been carried on for several years and it will be extended in the future, both at this station and at Hays. The purpose is to produce strains of alfalfa some of which will have special adaption to hay production and others for pasture purposes. The work gives indications of being very successful.

HOLMES THE AGGIE LEADER.

An Election That Meets the Approval of all the Rooters.

J. C. Holmes will lead the Aggies next season. He was elected captain immediately after the Washburn game, and his selection meets the unanimous approval of the K. S. A. C. rooters. Holmes has just finished his first year on the college team, playing the entire season at left tackle. He was easily the star of the Tyros last year, and has lived up to his reputation made on the first-team squad. He played strong defensive football from the first, and his interference was all that could be wished. His work has been consistent and effective; he has developed the knack of picking holes, or making them if necessary, to a degree that promises to put him in a class with Jack Gingery by the close of next season. Holmes hails from Piedmont, Greenwood County, and got his preliminary football experience at the Southern Kansas Academy, at Eureka, Kansas.

HOW THE ALUMNI CAN HELP.

A. D. Holloway, '07, Describes the Y. M. C. A. State and County Plans.

The influence of the state's agricultural college is apparent in many departments of life. Sometimes it is a graduate who starts a farmers' institute or builds a church. A. D. Holloway, '07, with headquarters at Marysville, Kansas, is secretary for the Marshall County Young Men's Christian Association. Mr. Holloway visited the college last week. It is the special desire of the county secretaries of the association to discover and develop leaders in religious and educational work. This, Mr. Holloway says, he and others are doing this year. The work will be particularly active in 1911 throughout Kansas.

"It is our desire," Mr. Holloway said, "to find men interested in boys. The plan is, then, to form boys' groups, the members to be from 12 years old to the college age. Our

plan is to interest these boys in Bible study, electricity, poultry, corn and other crops, and especially in the corn contests of 1911. The county would be divided into four groups for one-half acre or one acre contests. With this arrangement, the county farmers' institutes would help the groups to arrange for county corn shows next fall. We expect to do much work next year in encouraging boys in poultry breeding, school gardens, and small fruit growing.

"In Marshall County we have a county committee of 12 business men from the principal towns. This committee is a board of directors and meets quarterly. The committee hopes to establish in Marshall County—and possibly it will spread to other counties—the 'community play day,' which just now is a popular feature in some Eastern states. It is a day for young and old to lay aside their studies and business cares and enjoy themselves. We hope, also, to have introduced into the rural schools what are called 'life work talks.' But of course all these things can not be done at once; we need the help of the students in the college and out."

HOW ABOUT TWO SOUPS?

A Wholesome and Economical Schedule for a Day's Meals.

Soup twice a day may be regarded as unusual by some people. Other readers of THE KANSAS INDUSTRIALIST may find the following meals sufficiently palatable to try out on members of the family. They, the menus, are for the trying, anyway.

BREAKFAST		
Puffed Wheat	Grape Fruit	Cream
Rice Muffins		Fried Eggs
DINNER		
Clear Beef Broth with Rice	Celery	
Fried Ham	Stuffed Potatoes	
Graham Bread	Creamed Carrots	Butter
Dutch Apple Cake	Coffee	Vanilla Sauce
SUPPER		
Brown Beef Hash	Salsify Soup	Cheese
Hot Biscuit	Apple and Celery Salad	Honey
	Custard Bread Pudding	
	Tea	

CANDY AND COOKIES.

Two Recipes for the Holidays from the Domestic Science Experts.

You may desire to have a little extra, home-made candy for the holidays. Here are two recipes from the domestic science department, one for marshmallows and one for pferntüssen, otherwise German cookies:

MARSHMALLOWS.

2 cups sugar, 2 tablespoons gelatine, ½ cup water, 2 tablespoons cold water, 1 egg white. Soak the gelatine in cold water, cook the sugar slightly, nearly to a thread; add gelatine, add slowly to the unbeaten egg white, beating continually. Beat until stiff, add vanilla, and pour into pan; let stand until cold. Cut into squares and roll in powdered sugar.

GERMAN COOKIES OR PFERNTÜSSEN.

1 cup sugar, 2 cups flour, 1 tablespoonful baking-powder, ¼ teaspoonful nutmeg, 1 teaspoonful cinnamon, 1 teaspoonful cloves, 1 teaspoonful mace, 1 egg white, ¼ citron, 2 egg yolks, 1 lemon rind. Sift all dry ingredients, add grated rind of lemon and fruit. Mix to a dough with eggs. With oiled hands roll dough in small balls. Bake 15 minutes in moderate oven.

A MESSAGE FROM CALIFORNIA.

The Head of the Bloor News Service Sees the Kansas Industrialist.

Writing from Los Angeles a few days ago, James B. Bloor, head of the Bloor News Service, said this of THE KANSAS INDUSTRIALIST: "It's the prettiest and cleverest college publication I have ever seen. It will make technical education and technical farming popular by making it understood."

Mr. Bloor has been more than twenty-five years a newspaper writer or editor. His experiences have been varied and important. His acquaintances are everywhere.

MEN, MAIDS AND MILK.

NOON IS A BUSY TIME IN THE COLLEGE DAIRY STORE.

Students, and Some Professors, Carry Their Lunches and Enjoy the Richness of a Perfect Product as a Midday Drink.

The dairy and the dairy salesroom are busy places. The counter is close to a big refrigerator. If you were there any day at noon and couldn't see what was in the dozens of bottles you might suppose the lid was off at K. S. A. C.

But it's only milk; good, whole milk, or "cream-an'-all," as you used to call it. And although the clink on the marble counter and the thirsty crowd may remind you of the epoch of Kansas history in which Carrie Nation figured—and disfigured—it's a perfectly legitimate business and one of the best drinks under the sun. You can drink a quart of it—and many do.

The milk is bottled in quart, pint, and half-pint bottles and retailed at eight cents the quart. Many students buy a pint or a quart of milk and that's all they have for lunch. But good, rich milk goes a long way. Lots of nutriment in it.

The girls like it, too. But it's generally, "I'll take a half-pint, please;" not many quart bottles are handed out to the co-eds. A crowd of sorority girls ate their luncheons every day last spring on the stairway in the dairy building. Milk was the beverage and they got away with a good deal of it.

Professors, also. Some of them take their luncheons and depend upon that bottle of milk as they do a cup of coffee for breakfast. Professor Kammerer has the habit. He likes to get a bottle that has been standing a few hours so he can have a little cream for his bananas, or maybe grape-nuts, or even—well—er—yes—prunes.

Instructions to the beginners: Be mighty careful when you begin on your first bottle. Don't be too eager, for the bottle has a big mouth and the milk will rush out faster than you can take care of it. Ninety-nine beginners out of every hundred, according to the statistics given out by the noon crowds at the dairy, are fooled by the big mouths on the bottles. The milk gushes out into the face of the novice and runs down upon his necktie, or upon her pretty, pink *collier de chien*, whatever that is, and the crowd laughs.

ELECTRICAL ENGINEERS DEC. 6.

The Regular Meeting is to be in Room 60, Chemistry Building.

The regular meeting of the American Institute of Electrical Engineers will be held next Tuesday evening, December 6, in room 60 of the chemistry building. All who are interested in this kind of work are invited to attend. The meeting begins at 7:30 p. m. The following program will be given:

The daylight efficiency of artificial illuminants.....D. G. Blattner
The proper illumination of business houses.....Fred Krotzer
Street illumination.....L. L. Bouton
Illumination of the "den".....G. S. Croyle
Measurement of candle-power by luminometer.....C. L. Shaw and Homer Sloan
Demonstration of special shades.....W. C. Lane

The last number will be especially interesting, as Mr. Lane will show how to use the different kinds of shades for the different purposes.

"By Our Loving Friends—"

From The Eskridge Tribune-Star.

THE KANSAS INDUSTRIALIST, under the editorial management of "Charlie" Dillon, formerly of *The Kansas City Star*, has developed into the handsomest college publication this office ever has seen. Mr. Dillon very naturally carried to the paper ideas he had gained from long service on *The Star*. These ideas will win out, as they have on *The Star*.

Why Butter is Costly.

The high price of butter is explained: Butter contains thirteen chemical fats. Chemical fats come high, especially in the form of butter, and when you get thirteen of them in the same package you simply have to pay for them. Quit growling.

FARMERS NEED SYSTEM.

BOOKKEEPING AND BUSINESS METHODS ARE IMPORTANT ESSENTIALS.

Pleasant Crabtree Discusses Up-to-Date Ideas for the Modern Agriculturist—A Few Minutes Work Every Night.

From The Kansas City Star:

Bookkeeping for the farmer. Sounds rather paradoxical, doesn't it, to couple with the weather-tanned visage of the farmer, the mental picture of a stoop-shouldered manipulator of columns and figures? But that's another suggestion the farm expert has to offer to the country dweller who is seeking to put his work upon a modern, scientific, business-like and profitable basis.

And why shouldn't the farmer keep books?

The banker who did not have his statements of liabilities and assets of every transaction, would be entertaining the bank examiner within a week. The merchant who did not have his daily account of profit and loss soon would be conducting a cut-price bankrupt stock sale. But in farming—the feeding of a nation, the greatest business of them all—little or no attention is paid to bookkeeping.

HOW THE FARMER FIGURES.

The average farmer is satisfied if he makes a good living and "lays by" a few hundred dollars in the bank. A year of bumper crops—Kansas nomenclature—he may lay aside several thousand dollars, or add to his acres his neighbor's "forty." In a year of leanness he may have to call upon the country bank to tide him over. But always, he figures his profit by what he has in visible assets. The cost of it all—a fair return on his investment, the value of the land, interest on his working capital, his farm machinery and farm live stock, and a reward for labor expended, is neglected.

Prof. P. E. Crabtree, an assistant in farm management at the Kansas State Agricultural College, who was in Kansas City yesterday, told something of the value of an accurate and complete set of books to the modern farmer.

NO SCIENCE IS NEEDED.

"The books the farmer should keep," he said, "need not be complex. The more simple they are the more accurately they will be kept and the more value they will be to the farmer. The why of the account books? To enable the farmer to determine whether he is running his farm on a profitable basis or not; to make it possible for him to increase its yield and return by changing his methods and crops; to make certain that part of the land is not being made to bear the burden for the remainder; to make certain that certain animals are not costing more to keep than they are worth.

"For example, a farmer may devote a certain field, say forty acres, to one crop. He may put a certain amount of work upon it and yet it will yield but little profit compared with another field of the same size which has received the same amount of labor. The lesson of this—grow the crop that brings the larger and more certain returns. If this farmer did not keep books he probably would keep on growing the same crops the same way for years and years, while by farming as his account books direct he might greatly increase the yield of his entire farm."

And then the expert qualified his statement.

"Into the cost of the crop," he said, "must be computed the cost to the soil fertility. This always must be an important factor in determining the net profit from a certain field."

A farmer need know little or nothing about the approved business college ledger system to keep his farm accounts. It requires only a little time—five minutes at night is ample to make the few simple entries. The system—well that depends on the ingenuity and wishes of the farmer. But he should at least keep a record of his live stock as well as every field he tills.

A sample page from the general farm account could run something like this:

FIELD 1—SOUTHEAST FORTY ACRES.			
Crop.....	preceded by.....	(date).....	condition.....
plowed.....	(man labor).....	(horse labor).....	cost.....
harrowed.....	(date).....	condition.....	cost.....
disked.....	(man labor).....	(horse labor).....	cost.....
rolled.....	(date).....	condition.....	cost.....
planted.....	(man labor).....	(horse labor).....	cost.....
drilled.....	(date).....	condition.....	cost.....
cultivated.....	(man labor).....	(horse labor).....	cost.....
harvested.....	(date).....	condition.....	cost.....
yield, per acre.....			

One field does not require the same treatment as other fields planted to a different crop. Eliminate the items that are not needed, but keep an accurate account of the cost in man labor and in horse labor of every bit of energy expended on the field. Subtract that from the value of the crop and you have the net profit of the field. At the end of the year, compare the figures from this field with those planted to other crops. Take into consideration the peculiar weather conditions that may have existed, and then the farmer knows exactly which is the most profitable.

AN OLD ALUMNUS HERE.

Walter T. Swingle is Now Physiologist in the Plant Bureau.

Walter T. Swingle, a graduate of the Kansas State Agricultural College in 1890, has been visiting his father, J. F. Swingle, in Manhattan. Following his graduation in 1890, W. T. Swingle was appointed to a position in the United States department of agriculture. He has steadily risen in the department and is now physiologist in the bureau of plant industry, with headquarters at Washington. His work deals with plant introduction and their life history.

Mr. Swingle has traveled extensively in Europe, Asia and Northern Africa. He has been especially successful in getting varieties of dates and figs adapted to Southern California, Arizona and parts of Texas and in introducing varieties of Egyptian cotton. He has recently inspected the stations, of which he has charge, in Arizona, Colorado, and Nevada. Mr. Swingle is still very much interested in the college and finds that men trained here prove exceptionally capable assistants in his work.

ANY PURE SEED-CORN?

Write Promptly to the Agronomy Department and Answer These Questions.

Many inquiries are received every year from farmers desiring to buy pure seed-corn. To supply the desired information the Kansas State Agricultural College should have immediate answers to these questions:

1. What quantity of seed-corn do you have for sale for next year's planting?
2. What portion of this corn will be sold in the ear and what portion shelled?
3. How will the distinction in grade be indicated?
4. What is the price of each grade?
5. From what source was the seed obtained?
6. Is the seed free from mixture with other varieties?
7. Any further information concerning its previous breeding will be valuable.
8. Approximately what was the yield an acre the last year?
9. What percentage germination do you guarantee?

Address this information to the agronomy department, Kansas State Agricultural College, Manhattan, Kansas.

Cereals Suitable for Winter.

Cereals supply heat and energy. They contain a large proportion of the necessary food ingredients in proportion to their refuse, are readily prepared, and are palatable and digestible. The actual digestible nutrients are supplied to the body more cheaply by cereals than any other food except the dried legumes, such as beans and peas. The amount of mineral matter required daily by the body cannot be very definitely decided upon, but that supplied by an ordinary mixed diet is about 20 grams, or 1½ ounces.

Ouch! Think of the Money.

From The Mound Valley Journal.

George Bonowetz sold three hogs to Grant Dixon Saturday morning for \$80.40, and three a week ago for \$83.

BE CAREFUL OF SUGAR.

YOU'RE ENTITLED TO 90 POUNDS A YEAR, BUT—

Too Much, a Recent Bulletin Shows, is Bad for the System—Some Interesting Things in "A Study of Foods."

Have you eaten your 90 pounds of sugar this year? If you haven't you're imposing on some one. That is the per capita amount set aside for everyone in this great and glorious republic. Think of it—90 pounds of sugar. Two thousand years ago when sugar first was used, or even centuries later, it was looked upon with suspicion. It was hardly considered a food, but was used in preparing medicines. Many theories were advanced concerning its harmful effects. Now sugar is used almost everywhere, and English-speaking people consume more of it than all other nationalities put together. It has become a habit, this sugar eating, and one that none tries to break.

Sugar is taken in many ways, aside from the amount consumed in candies, which is considerable, in tea and coffee and chocolate and cocoa and in countless other food preparations. And if not carried to excess, it's a good thing and builds up energy and helps along the nervous and muscular work. Still if you eat too much of it, any sensible doctor will tell you, sugar will lead down the road that ends in rheumatism and a lot of other ills that every human being should side step if possible.

But that isn't all: Many of the ailments to which man foolishly believes he is heir are only the result of his recklessness in choosing food. Men scold children for crying for the desert; but every time they get within reaching distance of apple pie, or something else they like, both hands go out automatically and they eat themselves into a spell of illness.

The green vegetables, for instance: nearly all of them are unsuitable for invalids because they are not easily digested. Creamed cauliflower will do if you are down on your back—but who cares for cauliflower in such circumstances? In "A Study of Food," a bulletin written in the domestic science department of the Kansas State Agricultural College and edited by Mrs. Mary P. VanZile, dean of women, attention is given to some important food problems. Green vegetables, this bulletin declares, from a pocketbook standpoint, are an expensive source of nourishment, as they are mostly water. Their redeeming features, however, are attractiveness and variety to diet; they supply mineral salts and act as ballast.

Spinach contains more mineral matter than any other vegetable. Asparagus and celery should be used while young. Radishes are a good condiment. Small peas are more nutritious than most green vegetables. Onions and horseradish are of some use, also; they stimulate the flow of digestive juices. Potatoes should not be used to form staple diet because of their bulk compared with the small amount used for nutrition.

BE ONE OR THE OTHER.

No Dairyman Should Attempt to be Also a Beef Producer.

Success in dairying, as in any other business, comes only to those that give it their whole attention. The dairyman should have one definite object in view. He should be either a dairyman or a beef producer, but not both.

Dairy products command attractive prices. In this business one good cow is worth several poor ones. It is estimated that the cost of keeping a cow is 150 pounds of butter fat a year. A cow, to be profitable, must exceed this amount.

But how is a farmer to get a herd of good cows when prices for such animals are exceptionally high? Breeding. In breeding, the sire should come from a family known to excel in the production of dairy products.

Every farmer should keep a record of the yield of every cow. The milk

COMING TO THE Corn Show?

The big December gathering of farmers who grow the kind of corn that makes Kansas famous the world over.

Premiums Worth \$1,000

Entries for the National Corn Show are made in this meeting. How many prize winning ears can you grow?

The last week in December

In the State Agricultural College buildings. The Kansas Corn Breeders Association in charge. Noted speakers will entertain the visitors with timely talks.

Information about exhibits may be obtained from

E. G. SCHAFER, Secretary,
Manhattan, - - Kansas

should be weighed, and, if possible, tested by the Babcock method, which determines the per cent of butter fat. The keeping of such records need take a few minutes and is the only way to determine the yield of every cow, and do away with the waste of feeding unprofitable cows.

Strawberries a Leading Fruit.

Although specialists in rheumatism bar them, strawberries are the most important of small fruits. Fruits containing more than 80 per cent water are called flavor fruits; for example, peaches. Those containing more than 20 per cent solid are called food fruits, bananas, for example. Fruits are mostly water, varying from 14 to 92 per cent. Those with high "water content" cannot be regarded as a source of nourishment as much as refreshment, and to give variety to diet. Acid in fruit is a good blood purifier.

Meeting of the Science Club.

The regular meeting of the Science Club will be held in the Physical Science Hall (C-26) Monday, December 5, 1910, at 7:30 p.m. Robert K. Nabours, instructor in geology, will present a paper, entitled "A Preliminary Study in Heredity." This will be followed by a talk on "Vocational Education for the Public Schools of Kansas" by E. L. Holton, professor of rural education. All interested are cordially invited to attend.

Why So Peevish, Senator.

From The Salina Journal:

The possession of a winning football team seems to have gone to the heads of those Aggies. They are fussing about "hops" and "proms" and about "rules for the freshmen" and "frats" and "barbs" and a lot of other silly things. In fact, they are beginning to act very much like the K. U. students.

Use your friends by being of use to them.—*Fra Ellbertus.*

KANSAS LOW IN LUMBER.

ONLY SIX MILLS IN THE STATE, ACCORDING TO A REPORT.

In 1909 Only 11,000 Feet of Lumber Was Produced in the State—Missouri, Also, Was Low with ½ Million Feet in the Year.

Kansas had only six lumber mills in 1909, with a production of 11,000 feet of lumber. Missouri, its neighbor, produced about ½ million feet of lumber.

The lumber cut in the United States last year was 44,585 million feet, board measure—an increase of 34.2 per cent over 1908, while the production of lath and shingles was in like proportion. The output of lath and shingles in 1909 was 3,712 million and 14,945 million, respectively. This substantial increase was general, few of the states showing a decreased cut in the lumber produced.

Washington produces the largest amount of lumber in the United States. Its annual output is about 3½ million feet. Louisiana ranks next with a lumber production of 2,972,000 feet in 1909.

In the group of coast states, from Virginia to Texas, inclusive, with Arkansas and Oklahoma, stands probably not less than nine-tenths of the present supply of yellow pine stumpage. The proportion of the total cut of lumber in the United States contributed by this group, with Kentucky and Tennessee, has been steadily increasing during recent years. Their total output in 1909 was 22,057 million feet, or 49.5 per cent of the total output of yellow pine in the United States.

New York and the New England states furnish 9 per cent of the total lumber cut in the United States in 1908, and only 7.5 per cent in 1909. Although the wood-pulp industry continues to make heavy and increasing draft upon the supply of spruce, this tree shares with white pine the place of first importance among the lumber timber of this region.

THE KANSAS INDUSTRIALIST

Volume 37

Kansas State Agricultural College, Manhattan, Saturday, December 10, 1910

Number 11

WORK THE SOCIETIES DO

VALUABLE TRAINING; PREVENTION AGAINST IDLENESS IN COLLEGE.

A Few Pointers Supporting the Call for \$20,000 to Finish Rooms in the New Gymnasium—Meetings in Unventilated Basements Now.

Did you ever belong to a literary society? Do you realize the value of a training that will give a man or woman the ability to think in a logical manner and to express these thoughts in clear terse English? Do you know that the ability to address a public meeting in a forceful, logical manner is one of the most important aids to success in any line?

The students of the Kansas State Agricultural College realize the importance of literary society training and they have banded themselves into nine purely literary societies and five scientific societies. Several of the societies were organized soon after the college was founded and they have a record of over forty years of efficient service.

Henry Jackson Waters, president, believes that literary society work is of great importance. In speaking of this work at the college he said, a few days ago: "Our students take a greater interest in literary society training than is taken in any other institution with which I am familiar."

SOME OF THE GRADUATES.

Among the graduate members of one of the older societies at the Kansas State Agricultural College are a congressman-elect; the director of the experiment station and the professor of horticulture in a western agricultural college; the president of Dartmouth University; the professor of paleontology at the University of Chicago; a successful livestock breeder; the editor of one of the leading western farm papers; an army officer, and hundreds of others who occupy positions of importance.

These graduates believe that much of their success in life was made possible by the training they received in their literary society during their college career.

The societies of the Kansas State Agricultural College meet Saturday afternoons and nights in strange places. Two societies meet in a small basement room in the library building—a room that has almost no ventilation. Two societies meet in class rooms in the same building. Others meet upon the stage of the Auditorium, in the old chapel, and in the Women's Gymnasium. Those that have regular halls are crowded together, two in a room, and are compelled to meet at different times.

MANAGES A LECTURE COURSE.

In spite of these difficulties the societies carry on efficient work and conduct several outside activities. They manage the largest and most expensive lecture course west of the Mississippi River, conduct the intersociety oratorical contests and the intercollegiate debates with other schools.

The Agricultural Association probably has been hampered the most by having no home. It has been moved from one class room to another in the Agricultural Hall and has been unable to awaken much enthusiasm among its members. When this association has a regular society hall the efficiency of its work will be increased largely.

Some provision for literary society halls has been made in the new Nichols Gymnasium. Charles H. Chandler, state architect, the designer of the building, said:

"To design a building of sufficient magnitude to comprehend the swimming pools and locker spaces necessary for young men and young women, and the gymnasium and armory floor sufficient for the drill movements of the cadet corps, we found it necessary

to carry out a design that, above the main floor, would afford considerable room which could be advantageously finished for the uses of the various literary societies of the college. We find that this space which is available for this purpose will amount to nine good-sized rooms. The appropriation was not sufficient to finish these society halls, and indeed I question whether, under the terms of the appropriation, we could have used the funds for such purposes. Therefore they are unfinished. The enclosing of the space to be finished for these purposes was made necessary to have a sufficiently large basement for the combined use of the boys and girls as before stated."

The board of regents will ask for \$22,000 from the legislature to complete this building. It is one of the important items. The rooms will be used daily, but this, the college officers say, is not so important as the fact that the

MORE DOGS THAN SHEEP.

THAT WAS THE LAMENTABLE RECORD IN KANSAS LAST YEAR.

In Kiowa County, Where 885 Dogs Were Permitted to Exist, 630 Sheep Were Assassinated—A Useful, Valuable Animal Neglected.

Kansas has more dogs than sheep! What do you know about that? Not finely bred, high-class, useful bird-dogs or valuable watch dogs, but just ornery, no 'count dawgs that howl and bay the moon and yap and bite people and snap at motor-cars and bicycles and tip over garbage cans and chase cats and annoy squirrels—the kind of low-down, measley dogs that sneaked into the Ark when Noah wasn't watching and hid behind the elephant or the yak or hartbeest until after the lines had been cast off and future generations were afloat for forty days.

GIRLS VISIT A WOOLEN MILL.

Twenty-six of Miss Antonetta Becker's Class in Textiles Went to Topeka.

It required a whole lot of interest, and energy, too, for twenty-six girls from the domestic art class to turn out in time to board a special street-car at 6 o'clock, last Monday morning, for a trip to Topeka. These girls are particularly interested in textiles. Joseph T. West, general manager of the Manhattan Interurban Street Railway Company, sent a car to the college for them so they should be able to leave on a Union Pacific train at 6:30 o'clock. Of the thirty who were to go only four missed the train, and they were snow-bound.

Miss Antonetta Becker, professor of domestic art, and Miss Bertha Donaldson and Mrs. B. S. Orr, instructors, accompanied the girls to the Oakland Woollen Mills. O. W. Neil, the manager, explained every process

HAPPY HOMES FOR 138.

THAT MANY GIRLS ARE IN THE SHORT COURSE COOKING CLASSES.

Sewing, Home Managing and Many Other Important Things Are Taught in the Six-Months' Session—How to Buy Meats.

One hundred and thirty-eight girls have been at work since September 22 in the short course for housekeepers at the Kansas State Agricultural College. They are learning the fundamentals of housekeeping—cooking, sewing, home decoration, home management. In this short course the practical part of the four-year course is crowded into a six-months' session.

In cooking, they have taken up first the kitchen range and its economical operation—the points of a good range; how properly to build a fire and keep it going at least expense. They have become acquainted with the time-saving kitchen utensils; learned what foods are most easily digested; which are most nutritious.

The first step was simple enough: boiling water and reading a thermometer. Then came a study of fruits—food values, preparation, serving. The uses of sugar, of fats and oils, the proper cooking of starch—these have all received attention. The selecting and preserving of fresh eggs (a matter that means dollars and cents saved in the course of a year); the nutritive value of eggs and milk and what is lost by cooking at high temperature—these few items give an idea of the practical work these girls are doing.

Lessons in cheese cooking were followed by meats. Considerable attention was given this branch of the subject. The girls have learned how to buy meat—which cuts are preferable; how to make palatable the cuts that are really as nutritious as the ones that are popular and therefore high priced, how to prepare these for the table with the least possible waste.

At present bread making is the one all-important subject. The family ought not to be dependent on the baker. And the woman that can bake good bread—well, she should be a joy forever.

The work in sewing has gone on just as rapidly and thoroughly. The course includes lectures, note-book work, and practice. After learning the different stitches, seams, hems, and so forth, the girls began the practical work of making garments. They are now busy with the Snow system of drafting, and when they finish the course will be able to make anything from an apron to a wedding gown.

HELP YOUR COLLEGE!

Incidentally in Doing It You'll Be Helping Those That Need It.

The president of the college, Henry J. Waters, urges every student to do all he can to increase the enrolment in the winter short course, to begin January 3. Every student should hand to J. H. Miller, superintendent of the extension department, the names of boys or girls who should be in college or who might take this short course.

"Thousands of boys are on Kansas farms who should come here and take this course. They would go back and be better farmers," President Waters said. "Write personal letters to such persons, talk to them during the Christmas holidays and urge upon them the importance of this work and the benefits to be derived from it. Help your friends and help the college."

A Visitor from Illinois.

Fred L. Charles, professor of agricultural education in the Illinois Agricultural College, at Urbana, was here Thursday. He remained only a few hours.



The flocks in Kansas are small and scattering.

society meetings provide training and entertainment and keep the boys and girls busy upon days and nights that otherwise would be given to idleness. And idleness in a college is no more to be desired than upon a ship at sea.

FARMERS MEET DECEMBER 17.

Three Hundred Institutes Should Get Together That Afternoon.

Three hundred farmers' institutes in Kansas are expected to meet, 1:30 to 3:30 o'clock, Saturday afternoon, December 17. The subject for general discussion will be "Needed Legislation of Interest to the Farmer." Under this head are two important items: school legislation—length of term; amount of levy; teaching of agriculture; minimum wages; library consolidation—and road legislation, covering the separate levy for dragging; poll tax in cash or labor; one or more overseers for township; raising tax limit for bridge and road purposes or removing it altogether; should price of labor and teams be fixed by law; and the motor-car tax.

The discussion of each subject should be limited to one hour. Speakers should be limited to five minutes. Members of the legislature should be invited and urged to attend.

A Luncheon for K. S. A. C. Heads.

Henry Jackson Waters, president of the Kansas State Agricultural College, and J. H. Miller, superintendent of agricultural extension, and N. S. Mayo, former professor of veterinary science in the Kansas State Agricultural College, now at Blacksburg, Virginia, were entertained at luncheon recently at the Cosmos Club. Members of the K. S. A. C. alumni in Washington were the hosts.

Think of it: in 1909 there were 198,994 dogs in this state and only 159,271 sheep. But that's not the worst of it: Dogs killed 1,463 sheep last year in Kansas. In Kiowa County 630 meek and lowly ba-baas died to satisfy the blood thirstiness of dogs. Kiowa County had 885 dogs. It probably has a thousand now and fewer sheep.

Kansas is well fitted for sheep breeding. It was said of sheep in the biennial report of the board of agriculture, a few years ago, that "No husbandman is so poor that he cannot profit by its partnership; no one so rich he can afford to ignore its helpfulness." Where sheep graze the grasses have added luxuriance, and grains grow more abundantly. No other animal is so inexpensively reared and none is at once so happily adapted to generously clothe and nourish human kind.

The wool clip in 1908 was 455,882 pounds. It sold for \$86,617. That's not very much for a state with the acreage and population of Kansas. Kansas sheep have won prizes wherever shown, and still the state, in 1910, probably hasn't 175,000 head. The wool clipped from Kansas sheep is the finest and heaviest produced in any part of the world. If many times the number of sheep now in this state can be reared on the chalk cliffs of England, why not in Kansas, where conditions are so much better? Sheep breeding is not an experiment in Kansas. It has proved a success wherever tried. Any man's farm will be improved if he has a few sheep running on it. For one thing, they will eat the weeds and so give the tender grasses a chance for life.

That man is the best educated who is the most useful.—*Fra Elbertus.*

through which the wool passes from the sheep's back to the back of the person buying the finished garment and, moreover, went with the girls from machine to machine as the product went along. "This is shoddy," the mill man said, and the girls smiled because only the week previous they had been studying that kind of textile.

After the visit to the mill the girls went to the store of the Mills Dry Goods Company where Mr. Baker, manager of the carpet and rug department, explained the making and marketing of oriental rugs. The impromptu speech included many interesting legends connected with the rug industry, chiefly concerning the meaning of the several designs.

Luncheon at Mrs. Julia Wiley's rooms was followed by little journeys to the Capitol building, the historical society, Washburn College, and other places of interest. The girls returned to Manhattan on the 8 o'clock train.

HAMILTON THE MANAGER.

Athletics Next Year Will Be Guided by the Professor of Physics.

J. O. Hamilton, professor of physics, was chosen general manager of athletics for the coming year at the annual election, yesterday, of the Athletic Association. The other officers are: President, "Shorty" Fowler; vice-president, Ray Laffin; secretary, Ray Anderson; treasurer, R. J. Barnett; score keeper, Clay Lint.

The following student managers chosen last spring will hold office a year: Manager of baseball, Harry Bates; manager of track athletics, Eddie Larson; manager of tennis, Ray Anderson; manager of basket-ball, George Ratliffe.

THE KANSAS INDUSTRIALIST

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PRES. H. J. WATERS..... Editor-in-chief
PROF. C. J. DILLON..... Managing Editor
DR. J. D. WALTERS..... Local Editor

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The typesetting and other mechanical work is by students in the school of printing, of which J. D. Rickman is superintendent. Both these departments are in Kedzie Hall.

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SATURDAY, DECEMBER 10, 1910.

THE PEOPLE'S COLLEGE.

The widespread influence of the agricultural college is reflected in the announcement that 300 farmers' institutes are to meet one afternoon next week to consider legislation of interest to their business. Men recently elected to the legislature—and the holdovers, too—have been invited to attend these meetings. Measures heretofore enacted and others likely to be proposed will be discussed, not from partisan viewpoints but with the idea of gaining the unprejudiced opinions of those most directly affected. Road laws, taxation, rural education and similar pertinent matters are to be talked over, as they properly should be, by the voters who have chosen men to represent them in the forthcoming session.

This comes cheerfully close to popular government. It is a fine exemplification of the best type of community gatherings, and it is, incidentally and directly, the strongest possible proof that the authorities of the college at Manhattan have not been satisfied to carry out only the routine program naturally to be expected in a great technical school. It shows that they have given constant attention to the needs of men whose occupation has made it impracticable for them to enjoy, at first hand, the incalculable benefits of technical education. It preaches a powerful lesson—this army of farmers in meetings upon a winter's afternoon—a lesson that emphasizes the importance of just the sort of work that Superintendent Miller, in the agricultural extension department, has been doing with his trained organizers, the sort of work that no earnest and intelligent legislator should neglect to study and understand.

The farmers that go to the 300 institute meetings next Saturday afternoon are leaders in their communities. Their presence in the assemblies throughout the year proves it. They are the kind of get-ahead farmers that will be found traveling to Manhattan, soon, for the state gathering of institutes in the college buildings, the men that desire to know all about the latest and best methods and systems in agriculture, under which general term is included the important departments of animal husbandry, dairying, and the several branches of instruction that are putting Kansas farms and Kansas farmers and Kansas livestock in the foremost rank.

Every legislator in Kansas should attend these institute meetings in the counties and at the college December 26-31. In no better way can they see and hear confirmation of what every live farmer in the state knows: that for every dollar invested in the college it has returned 100 cents, over and over, in young men and young women educated to take upon themselves the real things of life when life begins in earnest at the end of the college term. No man, however prejudiced, could attend these plain, practical, common-sense meetings, this month, and go away unconvinced that his duty to the college and to his constituents lay in furthering the laudable plans already outlined for the future. It is a mighty encouraging spectacle to see 1200 or 1500 farmers and their families gathering at the farmers' college for improvement in the vital things that concern them. No legislator should

miss the chance to be a part of such a gathering.

THE MACEDONIAN CRY.

It is to be hoped that no newspaper in the state, large or small, daily or weekly, will neglect to participate in the farmers' institutes that are to meet next Saturday afternoon. Kansas has, approximately, 750 newspapers, a powerful force, if properly directed, that should be represented in all these meetings and in the more pretentious state institute, December 26-31, at the State Agricultural College. These papers can spread the gospel of better farming, better living, increased incomes, as no other agency can do it, for inevitably it happens that hundreds who need the light are certain, for one or another reason, to remain at home. The only great political reforms of the times have been brought about by the persistent hammering of upright newspapers; and in the ways of peace and progress they can be as influential. Papers are read nowadays, as well as being used in the pantry.

Once upon a time, long ago, a cry went up: "Come over into Macedonia and help us." Think about it, you 750 editors with your thousands of readers in every byway and roadside hamlet of Kansas—think of the 70,000 farmers that attended institutes in 1910—look over your books and see if you don't owe just a little something more to the men that help you along. Turn aside for a while from your "ads" and your "boiler plate" and your "patent insides" and join the farmers for a week or two and have the first real time of your lives. "Come over to Manhattan and help us."

THEY NEED NO JOBS.

How many young men are there in Kansas, to-day, or to-morrow either, eager for jobs as farm managers? By this is meant young men ready to leave their homes and undertake the care of other men's properties. As a prime requisite these men must be educated agriculturally. They shall not be tenants—the sort that let things run down to ruin—but managers willing to take a chance for a half or two-thirds of the profits. With every such job is a comfortable home and in most instances some modern improvements. Any such young men in Kansas? Any in this big college?

Within a month, five wealthy men owning farms have written to members of the faculty pleading for help in getting men to care for their farms. The requests caused an investigation that resulted in proving, to the satisfaction of those interested, that the boys and young men of the Kansas State Agricultural College are going home when they are graduated to manage their own farms or their fathers' farms and be happy ever afterward. Not a young man evinced more than passing interest in the offer of the wealthy men.

"I'm going home, to my own farm," said several. Going home! Isn't that fine? Are there two stronger words in the language or two that carry more hope and encouragement for the future of farming in this prosperous, go-ahead state? Not much. On the way with your jobs of managing—out with your attractive offers of salaries and comforts and two-third shares. Why should a Kansas boy listen to such tempters? What more promising outlook might he demand than that contained in his simple answer, "I'm going home to my own farm?" You can't turn the head of a boy with that prospect in view. He is looking ahead, farther than any city farm-owner can look, to the shelter of his own cot with wife and children, and barns well filled and live stock roaming over fertile acres, to say nothing of the bountiful crops. Jobs for these future citizen-farmers? They don't need them. They're going home from college with high ideals of what farming should be and is to be in the near generations, home to the old place with new systems, new hopes, new determinations. Go on with your jobs.

Competition is the life of agriculture. Do something good to-day and a neighbor will be after you with something a little bit better to-morrow.

AS TO JOURNALISM.

The Course Is Designed Especially for Students in Agriculture.

Upon the request of students desiring to receive instruction in industrial journalism, it is here announced that the course was established not to make newspaper reporters, but:

To develop the use of the English the students already have taken; to encourage them to write entertainingly and convincingly of the industrial subjects they are studying; to help them in bringing out the interesting, human story of agriculture in all its branches so that when they return to the farms or the other businesses they may choose to pursue they shall be contributors to farm literature, as it is or should be presented in farm publications and newspapers and magazines.

By industrial subjects is meant not agriculture alone, but engineering and architecture and domestic science and art or home economics. By this it will be seen that the girls are as welcome as the boys in the department of industrial journalism. There is just as much reason for a young woman to write of the important subjects taught in Mrs. Van Zile's department as for a young man to describe the results of corn breeding and stock-judging.

Every girl should be able to write a clear, concise story of cooking and sewing and art, whether she intends to stay in her own home or seek employment in the office of a woman's magazine. No subject is discussed to-day in the papers and magazines of the country that is more interesting than farming. Every one reads such articles. The demand for writers trained in agriculture and the other industries is growing steadily. If a young man shall elect to take up this work for a livelihood the chances are many and attractive.

The course in industrial journalism is elective for juniors and seniors. The stories written and "turned in" are corrected by the instructor and the defects pointed out to the class. By doing this the mistakes of one student serve as examples for the entire class.

WHEN HE WAS 21.

C. E. Huston, an Alumnus of '81, Returns as a Visitor.

When C. E. Huston was a student in the Kansas State Agricultural College—he was graduated in '81—only 267 students were enrolled. Of this number 179 were boys and 88 girls. There were only three buildings on the campus: Anderson Hall, the old Armory, and the first horticultural building, now a workshop.

J. T. Willard, now dean of science and professor of chemistry, was a student. He and Dr. J. D. Walters, professor of architecture, were the only pioneers to welcome Mr. Huston, one day this week, when he returned to visit the college. They were the only men now here who were here when he was a student. Thirty years after! Now the year's enrolment will be 2500!

MR. CAPPER'S ANNUAL GIFT.

The Regent Offers \$50, First Prize, for the Boys' Corn Contest.

Arthur Capper, owner of the *Farmers' Mail and Breeze*, and regent of the Kansas State Agricultural College, has given \$50 for the first prize at the boys' corn contest, to be held at Manhattan this month. This is the third year that Mr. Capper has given the first prize for this contest. He has promised to be present and speak to the boys. Five thousand of them participated in the contest last year in Kansas.

WHERE PRINTING IS TAUGHT.

The Best School is at the K. S. A. C., a Discerning Critic Says.

From Pointers:

A representative of this house who recently visited the printing department of the Kansas State Agricultural College reports that it is one of the neatest and most up-to-date newspaper and job offices in the state, and that it is kept in perfect order. It is not simply a well-equipped office but

the best school of printing west of the Mississippi.

The best schools of printing in this country, such as the Winona and those at Boston, and Manhattan, Kansas, do not declare their graduates are finished journeymen, but rather "advanced apprentices well grounded in the theory and technique of the trade, who are expected to acquire their practical experience and commercial dexterity during the final years of their apprenticeship in a shop." Those schools, however, with their superior facilities, probably come nearer turning out practical men in the line of printing than does any commercial, law, dental or medical school in its particular line.

A Golden Text.

Moreover the profit of the earth is for all: the king himself is served by the field.—Ecc. 5:9.

DO YOU EAT POTATOES?

Better Learn How to Grow Them, Then, and Save Money.

You eat potatoes. Every one eats them, but not many persons know how to grow them. Fewer know how to select and keep them for seed. The proper selection and storage of potatoes is of far greater importance in the effect upon the size and quality of the crop than the use of seed grown on other soil.

In the work at the Kansas State Agricultural College it has been found that in saving potatoes for seed it is better to select them in the field, from the hills having the highest number of marketable potatoes. When selecting from the bin smooth, even, medium-sized potatoes were taken.

Because of the price it is better to buy potatoes for seed while they are plentiful and keep them in storage till time to plant. The most practicable place to store potatoes is in a cool, fairly dry cellar, or root house. They must be kept so that the air can circulate among them. If this is not done they will heat and sweat.

The varieties best adapted to Kansas are the Six Weeks for early potatoes, and the Early Ohio for a medium season crop.

ANY ONE ELSE, NOW?

Here's the First Entry in a College Loyalty Contest Just Opened.

First entry in a contest for college loyalty: Dan Caseman, a farmer and cattle feeder living near Manhattan, is a graduate of Princeton University. All his buildings, barns, etc., are painted old gold and black, the college colors.

The Dress Parade Postponed.

Snow prevented a dress parade Tuesday or Wednesday. Instead, Captain Boice talked to the cadet corps Tuesday about "The Value of Military Training." He spoke, the following day, about the life of Frederic William von Steuben, the Prussian nobleman in whose honor a monument was unveiled at Washington, D. C., December 7, in recognition of his services in the War of the Revolution. Von Steuben came to this country when help was needed. Under his competent supervision as inspector-general, the army was re-organized. He drew up the first army regulations used in the United States.

The Umpires, Notwithstanding.

From The Kansas City Star:

At football this season the corn-fed "Aggies" from Manhattan have won ten games and lost only one, and have scored a total of 334 points to their opponents' 31. This appears to prove the value of corn as a ration for the football squad.

Louder, Please!

Some of the faculty members should speak more loudly in chapel. Many times they can not be distinctly heard across the Auditorium, especially in making the announcements.

Little Foxes.

Among the tender vines I spy
A little fox named "By and By;"
Then set upon him quick, I say,
The swift young hunter, "Right Away."

Around each tender vine I plant,
I find the little fox, "I Can't;"
Then, fast as ever hunter ran,
Chase him with bold and brave "I Can."

"No Use in Trying"—lags and whines
This fox among my tender vines;
Then drive him low, and drive him high,
With this good hunter, named "I'll Try."

Among the vines in my small lot
Creeps in the young fox, "I Forgot;"
Then hunt him out and to his den
With, "I Will Not Forget Again."

A little fox is hidden there
Among my vines, named "I Don't Care;"
Then let "I'm Sorry"—hunter true—
Chase him afar from vines and you.

—A. H. Morrell.

SUNFLOWERS.

Patience is the surest sign of courage.

Every man has his gift and the tools go to him that can use them.

Don't be hard on another unless you have withstood the temptation that caused his fall.

"The Slain Man Not Dead," exclaims the *Ablene Weekly Chronicle*, referring to the case of Carl Howey.

"We're above criticism," said the flat-dweller when the family below put in a knock on his children's noise.

A recent wedding was announced: "Hugg-Henry." Still there will be times when Henry will object to having his necktie rumpled.

"George Kopf Burned Out," says a headline in *The Salina Evening Journal*. As a matter of strict accuracy it was George's house that burned.

A knock on pure food, in the *EL Dorado Republican*: "The pure-food restaurant is for sale at a bargain; poor health makes sale necessary."

Something has happened. Roosevelt pictures have been cut in a Manhattan bookstore from 15 cents to 10. What does this slash mean? Is this the end?

A court contest was necessary in Kansas City to decide who should rear Myrtle Turnipseed. The court said nothing about Myrtle going to an agricultural college, either.

A conductor on the Wabash railway running to Excelsior Springs died "of excitement," the dispatches say. This is hard to believe, unless, perhaps, the train was found to be on time.

Now that the first shock is over, would it be asking too much to have it finally settled as to whether it is Tolstoi, Tolstoy, or, as a Western Kansas paper had it last week, Tolstey?

Farm products, President Taft's message shows, have amounted to only \$8,926,000,000 this year in the United States. Poor, poverty-stricken, down-trodden, misused farmers.

It is hoped the newspapers receiving special copies of *THE KANSAS INDUSTRIALIST* printed on one side only will not misunderstand the purpose. The editors are requested not to look at the blank side.

The civil engineering department is said to be making a "typographical" map of the campus. When this is finished the engineers might try their hands at explaining the topography of the campus, also.

A professor at the Kansas University has invented a clock that will turn on the gas. Kansas City people are praying that he may sell his invention to the gas company, which has been quite unable to turn on the gas this winter.

How's this for football dope: Harvard tied Yale; Vanderbilt tied Yale; Vanderbilt beat Louisiana University 30-0; Arkansas University beat Louisiana 51-0; Kansas Aggies beat Arkansas; Colorado College—but what's the use?

Anxious Inquirer: You win. The telephone pole between the rails at the bridge will be removed before the street-cars use the west extension. But you are wrong in supposing that car 501 has only three wheels. This is absurd.

"Kansas banks hold their own," said *The Kansas City Star* a few days ago. It's a pity Kentucky banks don't do the same. A banker in Louisville held a million of other people's money last week. He's to have ten years to think about it, too.

LOCAL NOTES.

The mechanical department is making a large desk for drawing boards.

Dr. Burton Rogers was called home last Tuesday morning on account of the death of his mother.

The Hamilton and Ionian Societies will give a special program in the old chapel next Monday night.

The domestic science department has received a shipment of three dozen stools for one of the laboratories.

The agricultural students met in the old chapel last week to organize an agricultural association. They are to meet again, later.

H. F. Roberts, professor of botany, spoke in student assembly Tuesday morning. His subject was: "The Science of Democracy."

Miss Frances Brown, of the extension department, returned Sunday morning from a three-weeks' institute trip through southeastern Kansas.

Some of the classes in cooking made bread last week. The girls worked late at night and were in the laboratories again at 7 o'clock in the morning.

The Alpha Beta Society met last Saturday night instead of the regular night on account of the expected lecture last Monday. But the lecture didn't develop.

Ralph R. Price, professor of history and civics, has been appointed instructor in American history and government in the Kansas University summer school next year.

Mrs. Mary P. VanZile, dean of women, talked before the Oak Grange Institute at Topeka Friday. Her subject was "Efficiency; the Key-Note of the Education of Our Girls."

The Y. M. C. A. cabinet entertained the Y. W. C. A. cabinet with an old-fashioned "candy pull" last Friday night. The meeting was in the home of Mr. and Mrs. E. T. Heald.

The department of music gave special music at chapel last Saturday. This is appreciated and it is hoped that the department will continue to furnish extra music throughout the college year.

The music department conducted student assembly Saturday of last week. Miss Clare Biddison sang "One Fine Day," from the opera Madame Butterfly. Robert H. Brown, assistant professor of music, gave a violin solo.

The domestic art department will have an exhibit of the work done by the sewing classes this term, Tuesday and Wednesday, December 20 and 21. A part of the exhibit will be retained during the holidays in order that the institute people may see it.

Olof Valley, professor of music, spoke on "Voice Culture," Tuesday, before the State Music Teachers' meeting at Emporia. Music, he said, required as much mental work as physical work. Prof. Valley also sang a solo in the evening concert.

Mrs. Mary P. Van Zile, professor of domestic science, lectured for the Riley County Teachers' Association last week at Leonardville, Kansas. Her subjects were, "Home Economics in the Public Schools" and "Rural Schools in the Educational System."

W. S. Gearhart, highway engineer in the extension department, has gone to Indianapolis for the Good Roads Congress. Mr. Gearhart is to speak of "Durable Bridges and Culverts." The congress is made up of experts in the several subjects to be discussed.

The United States war department has requested Dr. J. D. Walters to conduct an examination for public positions in the Philippine Islands. This examination is open for the Philippine students of the western colleges. It will be given soon after the close of the fall term.

H. S. McCowan, lecturer, failed to appear last Monday night at the Auditorium. It had been announced in the afternoon that he was not expected, so only about one-half the usual attendance was present. The committee will replace this date by another attraction if Mr. McCowan cannot be procured at a later date.

The Y. M. C. A. has printed 3000 folding post-cards. These cards contain 13 pictures, 11 of which show advantages and activities of the association.

Incandescents have been suggested for the Auditorium instead of the arcs now used. Arcs are noisy and, in this instance, give illumination but not light.

The dairy department is milking 28 cows, having added eight or nine fresh cows lately. For a time there wasn't enough milk to supply the demands of customers, but now all orders are filled and some milk is taken to the creamery.

Miss Annette Leonard, instructor in English, has prepared a complete bibliography of grammar, which will be used by the teachers of sub-freshman classes. A bibliography, may it please your Honor, is a list of the best works published about the particular subject in question.

Miss Ula Dow, assistant professor of domestic science, left Monday on a two-weeks' institute trip. She will spend the mornings instructing classes in the movable school system recently put into practice by the extension department of the Kansas State Agricultural College. The afternoons will be devoted to lectures before farmers' institutes. Her itinerary includes Phillipsburg and Smith Center for this week, with Mankato, Belleville and Clay Center on next week's schedule. Miss Dow spends two days at every place except Phillipsburg, where she is to remain for three days.

ALUMNI NOTES.

A son was born December 2 to Mr. and Mrs. Theophilus H. Scheffer of No. 4 Park Road.

Word comes from Elk Falls that a son was born to Mr. and Mrs. George S. Christy, '09, Friday, November 25.

Earl Wheeler, '05, spent Thanksgiving week deer hunting in Maine. The last heard from him he had one moose and two deer.

Charles Eastman, '02, has resigned his position in the bureau of animal industry and is now a practicing veterinarian at San Luis Obispo, California.

Margaret Haggart, '05, stationed at Johns Hopkins Hospital, Baltimore, as dietitian, recently spent a Sunday afternoon with her classmate, Inez (Wheeler) Westgate, at Lanham, Maryland.

J. B. S. Norton, '06, A. B. Gahan, '02, and W. R. Ballard, '05, faculty members of the Maryland Agricultural College, were numbered among the Washington alumni at the Waters-Miller-Mayo luncheon.

Harry V. Harlan, '04, is now connected with the bureau of plant industry, office of grain investigations, department of agriculture, Washington. Until recently he has been at the University farm, St. Paul, Minnesota.

Mrs. Henrietta W. Calvin, '86, professor of domestic science at Purdue, and D. W. Working, '88, superintendent of institutes of West Virginia, were in Washington the third week in November attending the American Association of Farmers' Institute Workers.

Edgar H. Dearborn, manual training teacher in Hawaiian schools, Box 130 Lahaina, Territory of Hawaii; Floyd Harrison, with the American Locomotive Works, 1022 Cabinet Street, Allegheny, Pennsylvania; Edward Skillman, with the York Manufacturing Company, 414 West York Avenue, York, Pennsylvania; Frank W. Newacheck, manual training teacher in Industrial Reformatory, Hutchinson, Kansas; Floyd E. Wilson, assistant in mechanical engineering, K. S. A. C., 711 Osage Street, Manhattan; Harold E. Rowe, post-graduate student, Pennsylvania State College, Pennsylvania; Ward Woody, manual training teacher in high school, 401 N. Oak Street, Creston, Iowa; A. R. Losh, assistant engineer, highway department, K. S. A. C., 1019 Bluemont Avenue, Manhattan.

HAVE YOU A TOOL SET?

EVERY MAN WITH A HOME SHOULD DO HIS OWN REPAIRING.

Here's a List of What to Buy and the Price, with a Few Suggestions—the Joy of Creating Things.

Every man should have a workshop; not only for the practical uses to which it may be put, but for relaxation. When a man goes home in the evening from a hard day's work, no matter of what kind, he should take up a line of thought and work entirely different from that which he has been following all day. The man who cannot relax in the evening and get his mind on something besides his day's work needs sympathy. All men, surely, at some time, feel the impulse to make some small, minor repairs about the house or farm instead of having it done. Mending chairs, tables, putting in extra corner shelves and all such things aids in creating a desire to make something entirely new with their own hands.

HAVE A PLACE FOR THINGS.

But too often this sort of work isn't done. Why? Because the man has forgotten where he left the hammer last fall after he nailed up the coal bin. And another thing that usually interferes, after the tools are found or borrowed, is that there is no place in which to do the work without littering up some room of the house intended for other purposes.

Two mistakes are commonly made by the man who, on the impulse of the moment, without any previous experience in the selection or use of tools, attempts to pick out a set. In the first place he will buy things he will never need, and in the second place he will forget some things that every carpenter should have. Therefore, a list of some of the essentials, as given by Jared Stuyvesant in an article on this subject in the December number of *House and Garden*, will no doubt be of help:

Adze-eye hammer.....	\$ 55
Round lignum-vitæ mallet.....	20
Cross-cut saw, 22-inch blade.....	1 50
Rip saw, 22-inch blade.....	1 50
Back saw, 10-inch blade.....	1 00
Try square, 6-inch blade.....	55
Steel carpenter's square, 16-inch blade.....	40
2-foot Boxwood folding rule.....	35
Marling gage.....	25
Hardened wood smooth plane, 9-inch, 2-inch cutter.....	1 20
Iron black plane, 7-inch, 1 3/4-inch cutter.....	85
Ratchet brace, 8-inch sweep.....	1 40
Auger bits, 4-16, 6-16, 7-16, 8-16, 10-16, 12-16, diameter.....	1 90
Expansive auger bit, 2 cutters, 1/4 to 3/4 inches in diameter.....	1 30
Gimble bits, 3-32, 4-32, 5-32, 6-32, in diameter.....	35
Handled and sharpened firmer chisels, 3/4, 1, 1 1/2 and 2 inches.....	1 00
Handled and sharpened firmer gouges, 3/4 and 1 inch.....	70
Winged divider, 6 inches.....	20
Spiral ratchet screwdriver, 3 blades, 14 inches.....	85
Sloyd knife, No. 6.....	35
Iron spokeshave, 11 inches, 2-inch cutter.....	30
Cabinet steel scraper, 326 inches.....	10
Handled bradawl, 13 inches.....	05
Flat-nose pliers, 5 1/2 inches.....	40
Round-nose pliers, 5 1/2 inches.....	40
Knife-handle monkey-wrench, 8 inches.....	50
Pipe wrench.....	70
Tinner's snips, 11 inches.....	85
Set of bit stock drills for brace or spiral screwdriver.....	50
Handled warding bastard file, 4 inches.....	40
Handled half-round bastard file, 6 inches.....	45
Adjustable level, 22 inches.....	90
Adjustable iron mitre-box.....	3 60
Glass cutter.....	10
Oil stone.....	35
Rose countersink.....	25
Nail set.....	10
Bench duster.....	25
Total.....	\$26 60

Every man should have a complete set of tools. He will find many uses for them besides the pleasure derived from working with them in spare moments. In order to keep a set of tools complete, that is, not scattered all over the house, the owner should treat them with respect himself—keep them hung on the wall above his bench in an orderly manner and the effect will be impressive; so impressive, in fact, that when others see how much he respects his tools they will hesitate to move them. The tool chest is out of date; tools should be kept on pegs in the wall over the bench. Any one will easily see the usefulness of a set of this kind which is always in place.

The enthusiasm of the beginner in craftsmanship will increase in proportion as his skill increases until he will not be content with merely making repairs, but will quickly pass on to the making of complete objects. It is the joy of the primitive man in forming something with his own hands.

Although the beginner in carpentry is likely to think it of minor import-

ance, a good bench is an important consideration. A good wood vise should be attached and also a good iron clamp vise. A bench can be bought for about \$15, or you can make one for a dollar and put on a vise for \$1.50.

There is the statement of the necessary outfit, minus nails, wood, etc. With this outfit the amateur woodworker will find that he can do work of which he will be proud.

HERE'S THE JOY OF LIVING.

A Well-Chosen Meal, Properly Cooked and Easily Procured.

Much of the joy of living comes from good meals, well planned and properly cooked. If any one of these suggestions can add in the least to that joy of living, THE KANSAS INDUSTRIALIST is fulfilling its purpose. If any of them are not practicable on the average Kansas farm, THE KANSAS INDUSTRIALIST desires to know about it, and why:

BREAKFAST	
Pettijohn Breakfast Food	Cream Syrup
Corn Griddle Cakes	Coffee
DINNER	
Baked Stuffed Heart	Tomato Sauce
Fried Squash	Mashed Potatoes with Cheese
Celery	Green Tomato Pickles
Whole Wheat Bread	Butter
Brown Pudding	Coffee
Heart Soufflé	Vanilla Sauce
SUPPER	
Bean Salad	Creamed Potatoes
Hot Biscuit	Lettuce Sandwiches
Cream Puffs	Currant Jelly
	Coffee Sponge
	Tea

Some Recipes for Christmas Candy.

COCOANUT DROPS.

Grate a cocoanut, or use a package of shredded cocoanut, add one-half its weight of sugar and the white of an egg, beaten until stiff. Mix thoroughly, drop by spoonfuls on tins and bake 15 minutes.

DOUBLE FUDGE.

Part 1.—2 cups granulated sugar, 2 squares chocolate, 1/4 cup of cream, 1 tablespoonful butter.

Boil seven minutes; then beat and spread in a buttered tin to cool.

Part 2.—2 cups brown sugar, 1 teaspoonful vanilla, 1 tablespoonful butter, 1/4 cup of cream. 1 cup nut meats.

Boil ten minutes, add chopped nuts; beat and pour on top of fudge in pan. When cool mark in squares.

Some Christmas cookies. Nice to have around Christmas week:

ENGLISH GINGERBREADS.

1/2 cup butter, 1 cup sugar, 2 cups flour, 1 1/2 teaspoonfuls ginger, 1 egg.

Cream butter, add sugar, add beaten egg, flour and spice. Mix well. Shape into small balls like marbles and bake in a hot oven ten minutes.

ROCKS.

1 cup butter, 1 1/2 cups sugar, 1 teaspoonful soda, 1 1/2 cups raisins, 3 eggs, 1 lb. nuts, 3 cups flour, 2 teaspoonfuls cinnamon.

Cream butter, add sugar and beaten eggs. Sift spice and soda into flour. Add flour, fruit and chopped nuts to first mixture. Mix well. Drop the stiff batter by spoonfuls onto an oiled tin and bake for about 15 minutes in a moderate oven.

A THREE-DAY DAIRY COURSE.

Milk and Cream Testing the Especial Studies December 13-16.

Arrangements have been made for instruction in milk and cream testing in a four-days' short course in this subject at the agricultural college. This course will be given December 13 to 16.

Because of limited space in the laboratories, the number taking the course will be limited to 25. The first 25 to register will be entered and, if this does not accommodate every one who wishes to take this work, the course will be repeated the following week.

A laboratory and registration fee of \$1 will be charged. This fee should accompany the request for registration in the course.

For further information address dairy department, Kansas State Agricultural College, Manhattan, Kansas.

A lame excuse is one that requires artificial limbs to make it go.

TO HONOR HARRIS HERE.

THE COLLEGE CAMPUS IS TO HAVE THE MEMORIAL.

A Bust of Heroic Size Decided Upon for the Former Regent—The Choice of the Site Was Made Unanimous.

The Harris monument will be erected on the college campus. The choice for this site by the committee in charge was unanimous. It was agreed, also, to have a bust of heroic size upon a pedestal of granite or some Kansas stone, with a bronze plate bearing an inscription.

The desire to erect a monument for Colonel William A. Harris, once United States senator from Kansas, was voiced by many friends in every part of the state, and in Kansas City, St. Louis, Chicago, and other livestock centers, soon after his death, December 20, 1909.

A SHORTHORN BREEDER.

Colonel Harris was noted as a breeder of shorthorn cattle, a fact that gave him wide acquaintanceship wherever breeders gather. This is shown in the membership of the committee finally selected by contributors of the monument fund. This committee was made up of Alvin Sanders, of the American tariff board, owner of the *Breeders' Gazette*, of Chicago; B. O. Cowan, secretary of the American Shorthorn Breeders' Association; Colonel J. F. True, of Topeka, proxy for Governor W. R. Stubbs; Senator H. W. Avery, of Wakefield, Kansas; John Thomas, of Dover, Kansas, and Henry Jackson Waters, president of the Kansas State Agricultural College, this city. The contributors voted unanimously to have W. R. Nelson, owner of the *Kansas City Star*, on the committee, but Mr. Nelson was obliged to decline the place because of business engagements.

BUT K. S. A. C. WON.

An informal ballot of all the contributors was taken by Colonel True to determine the settlement as to the site to be chosen for the monument. For a time a few wavered between voting for Linwood Farm, where Colonel Harris made his reputation as a breeder of shorthorn cattle; the cemetery near Lawrence, where he was buried; the building of the State Historical Society in Topeka, or the agricultural college at Manhattan, of which he was a regent when he died. More than one-half the contributors voted finally for the agricultural college campus as a peculiarly suitable place for the monument. Thousands of students, it was pointed out, and thousands of farmers who came yearly to the winter meetings and the short courses find in it encouragement.

READY FOR REAL WORK.

Technical Education Viewed by an Alumnus—Five of One Family.

"Although we are now practicing physicians, and we didn't learn our medicine here, the technical education we received at the Kansas State Agricultural College has been invaluable; it has doubled our earning capacity; it prepared us to meet the business men and the farmers, and it gave us an outlook upon life that we would not have had after years of classical training."

That's the way an alumnus spoke yesterday. Ross T. Nichols, '99, Liberal, Kansas, and Schuyler Nichols, '98, Herington, Kansas, were here for a few hours to meet old friends. They had just come from Kansas City, where they attended the Rock Island Surgeons' meeting.

Five members of the Nichols family have been educated in the Kansas State Agricultural College: R. T. Nichols, Schuyler, Gladys, '10, Harriet G., '98; Jessie Nichols is a junior here now.

An Address by Prof. Searson.

James W. Searson, associate professor of English, addressed the Washington County Teachers' Association to-day at Hanover, Kansas. The "Conservation of the Child's Energies" was the subject of Prof. Searson's address.

ANY LIFE IN THE SEED?

HERE'S A SIMPLE WAY TO ANSWER THAT IMPORTANT PROBLEM.

The Botany Department Contributes an Article Describing Experiments in the Interest of Clean Seed—Dark Colored Alfalfa and the Cause.

Here's a simple test, that anyone can make, to prove the value of seed, such as alfalfa, meadow fescue, brome-grass, cane, or Kafir-corn:

Lay a piece of blotting-paper upon an ordinary dinner plate; count out upon this, 100 seeds from the sample to be tested, and cover with another piece of blotting-paper and a second plate. Be sure that the blotters are always moist, but not too wet. Keep this apparatus moderately warm—about 70 degrees—and count and remove every day the seeds that have sprouted. Six to eight days will be enough to determine the value of the sample.

Some alfalfa growers and some dealers in the seed believe that brown or black seed in a sample does not hurt it for sowing. They say, "Such seed does not sell as well as the bright yellow seed, but it will sprout just as well and make just as good a crop."

WHAT TESTS HAVE SHOWN.

Now, there are very good reasons for believing that the latter part of this assertion is not true. Experiments conducted at the Kansas State Agricultural College have shown that the brown and black seeds in alfalfa either will not sprout at all or that only a small proportion of them will sprout. Twelve samples of alfalfa, only one of which could be considered poor, were found to contain 26 per cent of dark-colored seeds, or about 15 pounds a bushel. From these samples 100 dark-colored seeds were tested for germination. The average of the 12 tests was 36 per cent.

This means that if a sample contains 15 pounds of brown and black seed to a bushel, about 10 pounds in every bushel is entirely worthless. At 15 cents a pound this is worth \$1.50; an amount that should be deducted from the selling price of the seed. It should be clearly understood that of the twelve samples tested only one would have been considered really poor by any one not thoroughly familiar with alfalfa seed; and another had been marked "Fancy" by a seed dealer.

GET ONLY THE BEST.

Nor is this all. Further tests have shown that germination in soil under the most favorable conditions of heat and moisture is always much lower than in any sort of a germinating apparatus, where blotters, squares of flannel cloth or clay dishes are used. Seventy-three samples tested in clay germinating dishes gave an average of 77 per cent; average in soil, 57 per cent. No elaborate argument is needed to prove from these figures that even the best alfalfa seed will not be too good and that it pays to use only the best.

The objection may be made here that it is a very simple matter to sow seed extra heavy, if it looks to be of poor quality, and trust to quantity to bring up the stand. The answer to this is that poor seed is always unreliable and there is no practicable way of determining, in the field, with the seed ready to be sown, just how much should be added to make up for poor quality. The man sowing ten acres may think he can afford to use screenings at \$5 a bushel, but the large grower, of long experience, knows that the best seed at \$10 to \$12 a bushel is always the cheaper.

The dark-colored seed gets its dark color from one or both of two principal causes. First, rainy weather at time of harvesting; or second, heating in the stack. Either of these will kill the germ and turn the seed dark.

What has been said of alfalfa seed is true of the clovers, and, except as regards color, is true of grass seed, cane, and Kafir-corn. This, however, is to be remembered. Alfalfa and clover seed often are good for two or three years, though old seed should never be sown without being tested, while the seed of meadow fescue,

brome-grass, cane and Kafir-corn are practically worthless when more than one year old. In one neighborhood, last spring, several farmers sowed Kafir-corn twice and finally had to buy new seed before they got a satisfactory stand. Because of using old seed they lost the value of two sowings, the crop was later and could not mature so well, and was worse infested with weeds. A simple test such as is described in the beginning would have saved all this. Seed testing can easily be done at home by the farmer or some of his family, but weed seed determination and a germination test also can be obtained free of charge for residents of the state by sending samples to the Kansas State Agricultural College at Manhattan.

INTERCLASS GAMES LIVELY.

Third-Year Men Put Up Excellent Football Play Last Saturday.

The first of the interclass football games went to the juniors last Saturday 3 to 0. The score came at the beginning of the fourth period on a field goal by Young, the junior quarter, who played a brilliant game for the third-year men. The game was one of the closest contests seen on the home grounds this season, and was hard fought from start to finish. The juniors showed the better form throughout the game, but the seniors were generally on hand with a strong defense at critical moments. The juniors were also the principal sufferers in the penalty line, though both sides were freely penalized.

The near-graduates fumbled the kick-off, but recovered it and took the ball into junior territory. The remainder of the first two periods the ball seesawed up and down the field, Engle doing most of the gaining for the seniors, with several short gains by Larson and Price. Collins, Hartwig and Young did the heavy for the juniors, several of the red-headed quarter's runs being of the spectacular order. The juniors made most of the gains through the line; Potter and Hopper, the light senior ends, spilling the interference in good shape on the end runs that were attempted.

The third period won the game for the juniors, although the score did not come until the beginning of the fourth. The backfield and Mossman, Hartwig, Collins and Young worked the ball to the seniors' seven-yard line, helped materially by the way the junior ends, Norby and Stanley, stayed with the ball. One or the other of them was always on hand whenever either team fumbled. On the seven-yard line the seniors held twice for downs, but Young opened the final period by dropping back and lifting the ball over the cross-bar for the score that won the game. The remainder of the period was mostly in senior territory.

The usual class "scraps" were in evidence, but no one lost his temper, and no one was hurt.

The sophomore-freshman football game last Monday was some spicy affair. An inch of snow on the ground, and snow falling a good part of the time, went a good way toward making the game novel and interesting. One hundred and fifty rooters braved the weather—one hundred and ten of them braved the box-office; the rest of them crept through holes in the fence—to see the game, and they got their money's worth.

The freshmen scored first. The sophomores fumbled the slippery oval on the kick-off, but recovered it twenty yards from their own goal. Two attempts at sliding through the freshman line proved unavailing. Pollom tried a punt, but big Prather broke through and blocked it. The freshmen tried the skating stunt, but had no better luck than the sophomores. Sims dropped back and sent the slimy ball over for a trio of points. The sophomores scored in the same period. Pollom made a pretty return of a punt to the green ones' 10-yard line. Shortly afterward Shuster, the sophomore full-back, was sent on an eighty-yard polar slide for a touch-down. Score, 5 to 3 in favor of the two-year men.

There was no further scoring till near the end of the last period, when

HERE'S THE CORN SCORE

A CARD SHOWS HOW THE ENTRIES WILL BE JUDGED.

Shape and Length of Ears and the Uniformity of the Kernels, Color and Circumference—Other Points that Are Considered.

How is corn judged in the contests of which so much is heard? Nearly everyone is interested in this feature of the winter meetings of farmers and their boys at the college, but few persons, except the principals and the judges, know much about the points involved. To at least two-thirds of humanity, perhaps, a row of corn is just a row of corn—unless it happens to be the roasting ear variety, and then men are mighty particular. Here's the answer as to the judging of the corn that is making Kansas famous; this is the official score-card:

POINTS.	Perfect Score.
TRUENESS TO TYPE OR BREED CHARACTERISTICS:	
1. Shape of ears: Cylindrical, straight rows, proportional length to circumference.....	10
2. Length of ears, conformity to standard.....	5
3. Circumference of ears, conformity to standard.....	5
4. Color:	
(a) Grain, no mixed kernels.....	5
(b) Cob: White kernels, white cob; yellow kernels, red cob.....	5
5. Uniformity of kernels: Uniform size, shape, indentation.....	10
GENERAL QUALITY, as related to yield, feeding value, and vitality of seed:	
Proportion of Corn to Cob as Indicated by:	
1. Butts of ears: Kernels swelled out about shank regularly.....	5
2. Tips of ears: Filled out with regular-sized kernels.....	5
3. Kernels:	
(a) Shape: Slightly wedge-shaped, straight edges.....	10
(b) Depth: Deep or long.....	10
4. Space:	
(a) Furrow between rows.....	2½
(b) Space between kernels at cob.....	2½
Composition and Feeding Value:	
Large germ and horny layer, and a relatively small amount of the white starchy portion.....	10
Market Condition and Value for Seed:	
1. Vitality: Bright, well matured, firm on cob, large, bright germ.....	10
2. Soundness or freedom from injury: No cracked, rotten, worm-eaten, or otherwise injured kernels.....	5
Total.....	100

the sophomores had been pressed back almost to the goal line by the line plunging of Prather and Moss. Pollom skated back cautiously to the goal, warmed his fingers as best he could, kicked off an accumulation of snow and ice from his shoes, and signalled center for the ball, hoping to kick out of danger. Prather again broke through the line and blocked the kick, the ball going back to Pollom, who was downed behind his own goal. This safety tied the score, and neither team was good enough at sledging to break the tie in the few remaining minutes to play.

Pollom, Baker and Dubois showed up the best for the sophomores. On the freshmen side, Prather was the one big attraction. Moss made consistent gains the last half of the game whenever given the ball, and was largely responsible for getting it close enough to the goal to score the safety that took the underclass championship from the sophomores. Cleland also starred.

JOIN THE SCIENCE CLUB.

The Doors Were Opened, Formally, in the Meeting Monday Night.

The Science Club met in the Physical Science Building last Monday night. J. T. Willard, vice-president of the club, presided. A paper on "A Preliminary Study of Heredity" was read by Robert K. Nabours and illustrated with many lantern slides. The paper was much discussed.

After the lecture the question of eligibility of outsiders to membership in the Science Club was brought up by A. A. Potter. E. H. Webster, director of the experiment station, urged the advisability of opening the doors of the club to all interested in science. He moved that outsiders be admitted to membership. The motion carried. The names of about thirty proposed members were submitted by the secretary. They will be voted upon at the next regular meeting, Monday, January 2.

COMING TO THE Corn Show?

The big December gathering of farmers who grow the kind of corn that makes Kansas famous the world over.

Premiums Worth \$1,000

Entries for the National Corn Show are made in this meeting. How many prize winning ears can you grow?

The last week in December

In the State Agricultural College buildings. The Kansas Corn Breeders Association in charge. Noted speakers will entertain the visitors with timely talks.

Information about exhibits may be obtained from

E. G. SCHAFER, Secretary,
Manhattan, - - Kansas

CAREFUL OF THE WELL.

SAFE, DR. SLACK SAYS, IF IT'S PROPERLY PROTECTED.

Some Pertinent Information as to the Family Water Supply Particularly Applicable to the Rural Communities.

Beware of the Old Oaken Bucket! It is a dangerous thing in the hands of persons who may be caring for a typhoid patient, for instance, or doing other work likely to spread disease. "There are few safer sources of water supply than a good well tightly covered, properly situated and cared for," says Dr. Francis H. Slack, professor of bacteriology, in a bulletin just issued by the extension department. Dr. Slack declares that if wells have, in the past, proved to be the sources of infection it has been due to carelessness in one of the points with which he introduces his subject.

The desire to have the well convenient causes it to be sunk as close as possible to the house, Dr. Slack says. "Unfortunately," the bulletin continues, "the household wastes must also be disposed of and no doubt they contribute to the family water supply." The earth is a good filter and may keep back impurities for a long time, but ultimately they get in because the earth becomes thoroughly saturated. You can't be too careful.

FIRST, THE LOCATION.

The proper placing of the well, then, is of the utmost importance. The character of the soil, the depth of the ground water, the slope of the surface, must all be considered. A well should not be placed on a hillside if there is possibility of contamination above. A well with ground water approaching near the surface is more liable to contamination through seepage from near-by drains or closets than one where a deep ground water compels a greater filtration. A sandy soil makes the best and safest filter; a clayey or limestone region is most

dangerous, because of fissures and cracks which may allow a free passage of unfiltered contaminated matter.

CAREFUL AS TO COVER.

On the whole, under the best of circumstances, no possible source of pollution should be allowed within twenty-five feet of a well; with poor conditions as to soil or ground water the well should be far away from these sources of danger and possible disease.

Be careful about the well covering. Have it tight. Be just as careful about the casing. It should be of bricks laid in cement mortar, pointed inside. This casing should go down as far as possible and the space around it should be filled in with well-tamped clay. The casing should extend at least 18 inches above the surface of the ground and it should be protected for several feet around with a concrete shield. The platform should, of course, be tight so that not a drop of water may flow back into the well. Ventilation for a well is not necessary.

Wonder Why, Huh?

From The Kansas City Star.

The following All-Kansas teams were selected by Dr. Isadore Anderson, B. L. McCreary and other Kansas City football officials. K. U. and the Kansas Aggies were not included in the selection:

Then follows the list.

New Car Schedule Now.

Did you notice a change in the time that the street-cars leave the college gate? The Poyntz Avenue cars now leave at 10, 30 and 50 minutes after the hour, while those on the other line leave on the hour and 20 and 40 minutes after the hour. The change was made because of the new college schedule and because of the change in the time-table of the Rock Island.

Here's a good motto: "If I don't succeed, I don't want any salary."

THE KANSAS INDUSTRIALIST

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Number 12

THE CORN SHOW RULES.

VALUABLE PREMIUMS ARE TO BE AWARDED AGAIN THIS YEAR.

A Fine Program of Speakers and Many Attractions to Encourage Men and Boys in Growing the Very Best Product.

The sixth annual show of the Kansas Corn Breeders' Association is to be at the Kansas State Agricultural College, December 28, 29, and 30. Exceptionally attractive premiums will be awarded. The purpose of this association is to increase the yield and improve the quality of the corn in the state by suggesting better methods of culture and the use of better seed. To compete for premiums at the national corn show, exhibitors must first be winners in the state show at the college.

But the association does more than encourage farmers in corn growing. It is also the chief mainstay of the boys' corn contests. More than 5,000 boys participated last year in this contest in Kansas. They have gathered at the agricultural college every December in recent years in hundreds, every boy bringing his little sample and proudly displaying it among his elders. It is a mighty serious business with them all, this growing of corn, and it leads them on to the agricultural courses in the college that are to make them the scientific farmers of the future.

IN THE GROWN-UP CLASS.

In the "grown up" division of this big corn show there is a set of rules. Crops may be exhibited free by all members of the association. Outsiders must pay a fee of \$1, but this dollar may be used as a membership fee should the exhibitor desire to become a member of the association. The exhibit is open to all the farmers of Kansas, but only grain grown in 1910 may compete for the prizes. Here in brief are the more important rules of the corn show:

All samples of grain exhibited for prizes shall become the property of the Kansas Corn Breeders' Association. The association, however, gives the winners of the first five samples, in all classes, the right to exhibit them at the National Corn Show.

All grain must be delivered to the Kansas Corn Breeders' Association, Manhattan, care of L. E. Call, express or freight charges prepaid, by 6 o'clock p. m., December 27, 1910.

Samples should bear the name and address of the grower, and the class in which the grain is entered for premiums.

All corn should be wrapped to prevent shelling, and should be tightly packed in a tight box for shipment. No grain should be shown in more than one class. No exhibitor shall make more than one exhibit of grain in a single class. Exhibitors are allowed to remove four kernels from one place near the center of each ear of corn to study the kernel before exhibiting, but kernels must not be removed from other places over the ear.

All prize grain, the property of the association, will be offered at public auction at 10:15 a. m., Friday, December 30. Samples purchased at this sale may be claimed by the purchaser immediately after the sale, except those winning the first five places, in the various classes. These samples are to be delivered to the purchaser after the National Corn Show, January 30 to February 11, 1911, at Columbus, Ohio.

Ribbons awarded on any sample of grain shall become the property of the exhibitor and not the property of the purchaser of the grain. Displays and exhibits of grain will be on exhibition from Wednesday noon until 10:15 o'clock Friday, at which time the annual sale will occur. Grain on exhibition will be carefully handled, but the association will not be responsible for damage or loss. All samples of wheat must be in one-half bushel quantities.

The freight charges from Manhattan, or from the town of the donor, to the winner shall be borne by the winner of the premium. Any other expense incurred in handling the premiums shall be borne by the winner.

In the boys' contest, corn must be taken to the exhibit hall by the boy who grew it. No other entries will be received. All corn remains the property of the exhibitor, can not be sold here, and must be taken away by him. Corn good enough to be taken to Manhattan is good enough to be taken home and planted. All corn

should be entered Monday, December 26, from 9 to 12:30 or 2 to 5:30, or not later than 1 o'clock, December 27. No corn may be taken away until noon, Friday. No boy will be permitted to enter a ten-ear exhibit who did not win a prize in the home exhibit. No boy may enter corn in this contest who is not 15 years old and under 22 years, and no boy will be permitted to enter this contest whose name was not reported to the state office as a contestant on or before the meeting of his home institute.

The program for the three days contains five important talks on corn subjects by men who understand the business. Prize corn will be sold Friday morning, December 30, at 9 o'clock. The sweepstakes prize this year is a silver loving cup, worth \$100, offered for the best ten ears, any kind of corn,

NOW THE BIG INSTITUTE

THE STATE MEETING AT THE AGRICULTURAL COLLEGE DEC. 26-31.

A Mighty Interesting Program Has Been Arranged that Covers Everything from Crops to Rural Churches and Schools—Don't Miss It.

In many farm homes of Kansas the plans for December center around two projects: the old, old pleasures of Christmas and the visit to the agricultural college for the state institute meeting. The big meeting is scheduled this year for December 26-31. Approximately 100,000 farmers regularly attend the institute meetings in the 105 counties of the state. More than 1,200 farmers and their wives and sons and daughters came to the agricultural

in connection with the state farmers' institute at the Kansas State Agricultural College. No more interesting program has been arranged for years than that presented by J. H. Miller, superintendent of institute work. Two sessions of the conference are to be held Thursday, December 29, at 2 o'clock and 7:30 o'clock. Speakers for the day will be the Rev. A. E. Holt, of the Congregational Church of Manhattan, on "The Union Church for the Rural Community;" F. D. Pierce, "Y. M. C. A. Rural Work;" W. A. McKeever, professor of philosophy in the Kansas State Agricultural College, on "The Rural Church and Young People;" and Dr. Warren H. Wilson, New York City, superintendent of country church department for the Presbyterian Church.

The two sessions Friday, December 30, will be given wholly to the rural school. Miss Frances L. Brown will speak on "Home Economics in Rural Schools;" Miss Alice Hill, who stirred up "The Awakening at Alert," described in *The Kansas City Star*, recently, will tell of "A Graduate's Influence in a Community." J. F. Haines, superintendent of schools in Indiana, will describe "The Influence of Agricultural Fairs." "Agriculture in Secondary Schools" will be handled by Seth Babcock, of Effingham, W. B. Cochran, of Columbus, and L. E. Hazen, of Eureka. In the evening, Superintendent Haines, of Indiana, will speak on "What May Be Done in Rural Schools," and E. T. Fairchild, superintendent of public instruction in Kansas, will speak on "Consolidation."

SOME ADDED ATTRACTIONS.

Several Associations Are To Be In Session During the State Institute.

In addition to the regular class work incident to the winter meetings at the Kansas State Agricultural College, there are to be meetings of the Kansas Dairy Farmers' Association, the Sheep Breeders' Association, the Draft Horse Breeders' Association, and the Kansas Corn Breeders' Association. Two other features of importance in rural life have been added to the institute this year: Thursday afternoon and Thursday night the sessions of the institute are to be devoted to the rural church and rural life; and Friday afternoon and Friday night to the rural school and rural life. Special attention is to be given to the teaching of agriculture and home ec-

The Interest of the State.

The head of a state institution—like the agricultural college—should not be compelled to organize his friends, or play the lobbyist, to get money with which to do the state a service.

A state should not be put upon the defensive against itself.

—L. H. Bailey, *The State and the Farmer.*

grown by a boy of A class, anywhere in Kansas. Every boy in Kansas interested in corn growing knows what A class means. The cup shall remain during the year in the custody of the secretary of the Corn Breeders' Association. The Montgomery painting, familiar to all corn growers, young and old, in Kansas, will be awarded to the boy who shows the best single ear of any kind of corn. Any boy in the A class may enter this contest, whether he won out in the home contest or not, and it will not be required that he have ten ears in the state contest. The painting will be awarded to the winner for one year. He shall be pledged to return the painting at the next contest. When a boy wins the painting for three consecutive years it becomes his property.

SPARE THE CHRISTMAS TREE.

Dig It Up, Roots and All, and Later On Plant It.

Don't cut your Christmas tree this year. Dig it up, be careful of the roots. Why go on killing these beautiful trees every year? The only extra cost will be that of digging up the tree. A ball of dirt, about 18 inches in diameter, should be left to protect the roots. Slide the tree out of the hole (if the ground is frozen it will not fall from the roots) and place in a box. Use the tree for Christmas and, after the decorations and presents are removed, place in the yard. If the tree has been handled carefully, it should grow.

EDUCATING THE FAMILY.

Charley Maughlin and 1,000 Like Him Will Be Here Soon.

From The Sylvia Sun.

Charley Maughlin left this week for Manhattan, Kansas, to join his family, who have been there since the fall term of the agricultural college opened. Mr. Maughlin is doing a good thing for his boys and girls by giving them a thorough education in scientific farming and the girls in domestic science. His fall work is now completed and we think perhaps Charley will take some instruction in scientific farming himself.

J. H. Miller Spoke.

J. H. Miller, superintendent of the extension department, was in Winfield last week. He addressed the meeting of the Cowley County farmers' institute Saturday.

college last December. Probably a much larger number will be here this month.

WHAT DO YOU KNOW?

The December meetings of farmers at the college are mighty interesting affairs, not only for farmers but for ordinary city folk and town dwellers, if only they knew it. How many of you, for instance, know anything about corn judging or the judging of sheep, horses, and hogs? Almost any one has some idea as to the value of an ear of corn or the value of an animal; but this idea is based usually upon general appearances. How many know anything about dairying beyond the homely act of milking? How many know how to feed a cow and do it correctly? Isn't it worth while to learn something about poultry? Most men with homes would like to own a few chickens. And coming directly to the farm, isn't it important that men and boys should have expert instruction in the handling of plows, of machinery, of the gas engines that now are used on so many farms. Some farmers use plows for forty years and still do not know how to repair one when it breaks.

670 GIRLS!

Isn't it a fine thing that the state's women and girls can come to these winter meetings at the college and take a few days' instruction in cooking and sewing? More than 150 women and girls went in for that sort of work last year, and the number is increasing constantly. Six hundred and seventy are in the domestic science course now. Doesn't that mean good house-keeping?

It should be understood, by the way, that every woman and every girl in Kansas is welcome in these meetings. There will be a bread contest in the domestic science department and a buttonhole contest in the department of domestic art. Valuable awards will be given in both these contests. Special class work will be arranged for the four days, along lines specially adapted to farm life. The hours of instruction will be so made up that other departments of the college may be visited also.

RURAL CHURCHES AND SCHOOLS.

Questions to be Discussed in the Conference December 29-30.

Some of the things that come close to human nature and the problems of rural life are to be discussed, December 29-30, in the rural church conference

YOUR CHANCE JANUARY 3

DON'T FORGET THE WINTER SHORT COURSE OF TEN WEEKS.

The Schedule Is Arranged with Especial Reference to Giving Students Everything Obtainable Had They Entered in the Fall Term.

Don't stay out of the winter short course, January 3, because you fear you may miss some important study that began in the fall term. The assignments have been so arranged that the student who can spare only ten weeks shall receive all the instruction possible to impart in that time, upon every subject most vital to the up-to-date agriculturist. The short course presents the chance of the year for the man or the boy that is eager to get ahead, to be abreast of things, to learn the things he needs most to know. It furnishes the best possible concrete proof of college usefulness; it puts the college in closer touch with the people, and it rounds out a fine program of which any farmer in the state should be proud.

Among the good things awaiting those that take this course is a series of ten lectures, one lecture a week, on all kinds of farm machinery. The speakers will be farm machinery experts, sent here by well-known implement manufacturers. Their talks will not be to advertise their particular lines, but to impart all the information possible about the manufacture, use and proper care of farm implements. Some of the lectures will be illustrated with lantern slides.

A laboratory of farm machinery has been fitted up by C. F. Chase, instructor in farm equipment, in which the students may familiarize themselves with the several machines.

This is a list of the speakers, their subjects, and the date upon which they will talk:

Jan. 3—Plows.....W. J. Browne, John Deere Plow Co., Kansas City.
Jan. 10—Harrows, Pulverizers, and Cultivators.....W. J. Browne, John Deere Plow Co., Kansas City.
Jan. 17—Seeding Machinery.....E. L. Howard, for Van Brunt Mfg. Co., Horicon, Wisconsin.
Jan. 24—Harvesting Machinery.....Representative of International Harvester Co.
Jan. 31—Haying Machinery.....Floyd R. Todd, vice-president Kemp & Burpee Mfg. Co., Syracuse, New York. Manufacturers of Success Manure Spreader.
Feb. 14—Threshing Machinery.....J. B. Bartholomew, president Avery Co. Feb. 21—Corn Shellers.....Representative of Marselles Mfg. Co., Marselles, Illinois.
Feb. 28—Pumps and Windmills.....R. H. Yale, secretary Dempster Mfg. Co., Beatrice, Nebraska.
Mar. 7—The Gas Engine.....Representative of International Harvester Co.

How Kansas Helps Others.

Five graduates of the Kansas State Agricultural College are on the faculty of the Maryland Agricultural College. Does this speak for the value of technical training? Why did these men leave Kansas?

onomics in common and village schools. All the instruction and all meetings are open and free. There is no fee. Boarding-houses near the college can accommodate all who attend, as most of the students will have gone to their homes for the Christmas vacation.

As to College Men's Speech.

The college man is expected to use good English. But does he? asks Louis H. Beall, assistant professor of English language and literature. "The College Man's English; What It Is and Where He Gets It," in student assembly Wednesday morning. Correct speech, oral and written, he said, was a matter of habit. Men are too likely to speak carelessly. Four years of college training, he said, should enable the college man to acquire the correct use of English.

Among the courses taught in the short course are live stock market classes, feeding, judging, breeding, meats, sanitation; dairy farming, creamery instruction, dairy stock judging, butter making, cheese and ice-cream making, judging dairy products, crop production, grain judging, farm mechanics, crop judging, farm management, soils, insects and spraying, horticulture, and many other important subjects. The course ends March 14.

Here's a New Barn.

At the Illinois Experiment Station a new kind of dairy barn has been built. It is round with a silo in the middle. A barn of this kind has more room in proportion to the cost of the building and it is especially adapted to dairy purposes.

If you want to be great, move before you are shoved.

THE KANSAS INDUSTRIALIST

Issued weekly during the college year by the Kansas State Agricultural College, Manhattan, Kansas.

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PROF. C. J. DILLON.....Managing Editor
DR. J. D. WALTERS.....Local Editor

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SATURDAY, DECEMBER 17, 1910.

SEE FOR YOURSELF.

When Kansas was 25 years younger than it is to-day and the winds, apparently, were hotter and more frequent, the outlook less bright than now, and a Certain Fat Man was busy answering inquiries as to what was the matter—a quarter of a century ago when Kansas was struggling through the blighting touches of a boom, Taxpayer was forgiven if he grasped his purse with both hands and turned pale at the mention of appropriations. Twenty-five years ago. But now, if you please, what reason, what justification is there for a biennial chorus of penuriousness while the granaries and the ricks and the banks of the state are filled to the uttermost?

Why should men hesitate to invest—don't overlook that word *invest*—money while the state's savings banks contain enough money to give \$147 to every man, woman, and child? Is the money appropriated to the Kansas State Agricultural College anything except an investment? How is it possible for any level-headed business man—which includes farmers—to place any other estimate upon money spent to support an institution that is doing so much real service for the people? Better farms, better homes, better ideals of citizenship, better yields, which means more income—is anything more to be desired? Can any man familiar with the wide scope of the Kansas State Agricultural College work question its transcending influence in every one of these important activities? Can he doubt that the whole future of Kansas depends upon the high or low standard of its agriculture, and that the college at Manhattan is teaching the most advanced ideals in that great branch of learning?

And if, as might happen even in Kansas, some man elected to the legislature really does doubt these things, is there any reason for him to remain uninformed, unconverted? Certainly not; most emphatically and decisively not.

If any member of the legislature—house or senate—will visit the college, investigate for himself the magnificent opportunities it presents to the boys and girls—and the men and women, also—study the schools of agriculture, animal husbandry, dairying, and domestic science; see 675 girls studying to become worthy home keepers, competent to do anything from making a biscuit to building a bodice, from nursing a cranky husband to giving first aid to the injured—if a legislator will come to the college and see these things and go back and vote against giving it every dollar it needs for its work, he can prove himself, with one word, unable to comprehend the state's best interests, and will disappoint his constituents and injure himself. Come over to Manhattan, Mr. Lawmaker, and see for yourself.

MODERN AGRICULTURE.

The "overburdened taxpayer," says the *Wichita Eagle*, will feel that he is getting some return for his money when he understands the way in which agricultural colleges are attacking their many problems. It is the practice for competent state authorities to bring together the experience of the most successful dairy-

ing countries in the world, says the *Wall Street Journal*. Illustrated pamphlets showing the buildings of an English dairying farm, a group of Ayrshire cows at the milking hour, the interior of dairying stalls in Holland, and the various ways of marketing milk and milk products in different parts of Europe, are all presented to the Illinois or the Missouri or the Kansas farmer in such a way that people of average intelligence should have no difficulty in availing themselves of the results of such specialists' services.

Pork production is receiving special attention throughout the East and the interior. The subject is on the program for the autumn and winter institutes, a session of which is to be held in nearly every township in most of the leading agricultural states. These deliberations give actual results from feeding experience and marketing practice. In due time such concentration upon the meat problem of the country must tell largely to the advantage of producer and consumer, and afford justification for large appropriations for the public treasures for the promotion of agriculture.

National prosperity depends increasingly on translating expert scientific results into agricultural practice. The dairying of Denmark results now in an export of \$44,000,000 a year in the butter alone made from only a million cows in the 1,400 creameries of the country. This is an excellent illustration of the high earning power of live stock under modern methods of production. What Denmark has done might without difficulty be duplicated in the districts lying within 50 miles of most of our great city markets.

There are few lines of investment in which the increment is prospectively so great as that of labor and capital in farming. No pursuit has a more instructive literature, and certainly none is developing more rapidly as an attractive occupation for the youth of the land.

THE FARMERS' INSTITUTE.

The farmers' institute is the farmers' school. It is the young farmers and the boys who will be farmers in a short time who especially need the instruction which the institute is intended to furnish. Therefore, it should be attended by the boys, whether the old folks attend it or not. The young folks have less to forget. They are less wedded to preconceived opinions, says *Wallace's Farmer*. They are more open-minded, and therefore more receptive to new ideas.

We never count on much good from an institute where there are no boys or young men. Where an institute is filled up with retired farmers, as many of them are, there is not likely to be much good accomplished. That class of men have largely quit thinking about agricultural problems. Many of them have become stranded on the sidewalk. Many of them are prejudiced against any new ideas and new methods. The boys are largely free from this. They are more likely to catch the spirit of the new agriculture. They are not nearly so likely to weary the audience with theories long since exploded.

Get the boys out to the institute, even if you have to stay at home yourself. Encourage them to ask questions. We would rather have one question from a boy than two from a retired farmer. The question reveals the state of the boy's mind, and incidentally the state of the minds of the boys in the neighborhood. This acts as a sort of range-finder for the speaker, and enables him to state facts and principles which otherwise might be overlooked.

There is a class of farmers who are boys until they are old men; that is, they retain the receptivity of the boy's mind, the hunger of the boy for new ideas. There can not be too many of these in an institute, no matter what their age.

If your boys are really interested in agriculture, or if you wish to interest them, get them to the farmers' institute. Take them with you, if you can; but if someone must stay at home, let it be the father. The agriculture of the future in these western states de-

pends largely upon the young men and the boys. Therefore, give them every advantage.

THE CHANCES ARE—

Facts Are Cheerfully Handed to All Who Really Need Them.

From The Capital.

The chances are that one of Prof. W. A. McKeever's cigarette bulletins fell into the hands of President Ripley. That bulletin has had a circulation running up toward a million copies.

The chances are that President Ripley did get one of these valuable bulletins. The late J. E. Hurley bought 10,000 of them.

The Second Compromise?

W. A. McKeever attended the meeting of the Kansas State Temperance Union held at Topeka last week. Prof. McKeever referred to the defeat of prohibition in Missouri as the "Second Missouri Compromise." The first Missouri Compromise was repealed. Will history repeat itself?

Leave this straw on until late spring or until the plants begin to grow. Then pile it between the rows to have it handy in case of a late spring freeze. If not needed for this purpose it can be used as mulching until after the berries are picked, when it should be removed and burned.

If the ground is very dry it should have been covered before now. Remember this if your soil is dry next fall. In other respects the dry soil is treated the same as the wet soil. Freezing does not injure the strawberry plant if it stays frozen, but it is continual freezing and thawing that kills the plant by forcing up the ground and breaking the roots. A mulching put on as described will prevent the thawing during the winter, therefore your plants will be safe in the spring.

A Golden Text.

Why standest thou afar off, O Lord? Why hidest thou thyself in times of trouble?—Psalm 10:1.

CHRISTMAS LONG AGO.

The new way may be better and
I know I'm getting old:
I'm what they call a "has-been" or,
at least, that's what I'm told.
Yet I know 'twould make me happy
as I never am to-day,
If I could live one Christmas
in the old accustomed way.
The homemade gifts from mother
and the simple toys from dad
Seem to me the rarest treasures
that a fellow ever had;
For to-day brings back the pleasure
that all time cannot destroy
And I'm pinin' now for Christmas
as I knew it when a boy.

—Louis E. Thayer.

HOGS AND THE RHEUMATISM.

Here's a Remedy and It Comes From Men That Know.

Are your hogs troubled with rheumatism? If they are try this for a remedy:

Thirty to one hundred and twenty grains of salicylate of soda, or salol, to an animal daily for a week or two, or until the symptoms subside.

The extra layers of fat on a hog contain little circulation, therefore the hog can stand little exposure to cold or moisture and is very susceptible to rheumatism. This rheumatism is caused by a draft in the sleeping quarters, a damp floor, or overcrowding, especially where animals of different sizes are kept together, fed too highly and allowed too little exercise.

The symptoms are: The complete or partial loss of appetite, stiff legs or back, showing a weakness of the hind parts continuing for days, months, or throughout the life of the animal.

The remedy is reliable. It was suggested by the veterinary department of the Kansas State Agricultural College.

STRAWBERRY PLANTS COVERED?

If Not, You'd Better Hurry Out with Good, Coarse Straw.

Are your strawberry plants covered? If not, they should be. Do you know how to cover them properly? Here is the way recommended by the horticultural department of the Kansas State Agricultural College.

If the soil is moist be sure it is frozen before driving on it with a team and wagon, to prevent the packing of the soil. Cover the plants with from eight to ten inches of good, coarse straw or, better still, use slough grass. Either should be free from weed seed. Be sure the straw is not fine enough to smother the plants.

Electricity for Farms.

An improvement that has begun to attract considerable attention as a convenience for country homes is electricity used both for light and power. No recent experiments have been made to show the cost of a plant necessary to furnish electric power for a farm, but a good authority gave it as his opinion that if some natural power can be used to generate the current, electric power can profitably be used on the farm. If gasoline or steam power is used to run the dynamo, the expediency of installing such a plant is doubtful. Where water-power can be used to generate the current, electric power is the most satisfactory power obtainable.

Have the Feed Bins Ready.

A convenient way of arranging feed bins is to have them just across the mangers from where the horses eat, with a walk-way between them and the manger. The feed is handy and no time is wasted in going to another building for it. If room in the barn is limited the feed bins may be placed in the loft and emptied through drop spouts. This arrangement is handier than having them in the lower part of the barn, except for the extra work of elevating the feed.

A New High-School Paper.

The first number of *The High School Buzz*, written by students in the Hutchinson High School and printed by the *Gazette* press, has been received here. The *Buzz* is the successor of last year's *Oracle*. It is a worthy publication, carefully prepared upon high-school standards, and of exceptionally interesting contents. Indeed, the little paper deserves a more dignified name.

Just Being Happy.

Just being happy is a fine thing to do. Looking on the bright side rather than the blue; Sad or sunny musing Is largely in the choosing. And just being happy is brave work and true. Just being happy helps other souls along; Their burdens may be heavy and they not strong; And your own sky will lighten If other skies you brighten. By just being happy with a heart full of song.

—Ripley D. Saunders.

SUNFLOWERS.

F. J. Dandurand, says the *Glascow Sun*, killed a hog that had two hearts. It was not a bacon hog, however.

Editor Warren, of the *Appeal to Reason*, evidently had no reason to appeal to reason and for that reason must go to jail.

It required 500 grains of cyanide, a few days ago, to kill Gypsy Queen, a man-killing elephant. Did the authorities try typhoid germs?

"A decent living," said Lyman Abbott, "is the birthright of every human being; to have more than this, when others lack, is irreligious."

Simple Simon.—It is true. Grafting is to be taught in the winter short course. But the advertisement referred to trees. What a queer mind you have!

"The man who will not work for a small salary never will be able to prove he is worth a large one."—*Judge Latshaw, Criminal Court in Kansas City.*

Housekeeper.—Try a little glue in your jelly. It is a guaranteed preservative and will help, also, in imparting the consistency you so much desire.

At Narka, Republic County, a few nights ago, a lecturer's subject was "The Lost Chord." The next in the series is to be, "Who Stole Charley Ross?"

If the papers that waste space with "Twenty Years Ago" columns would hustle out and get a little present-day news there'd be less "boiler plate" in circulation.

One of the mysteries of life: Why will a pretty fluffy-haired, blue-eyed senior smile upon a big, awkward kid without ginger enough in him to learn his lessons?

Remembering the restrictions that hamper the speech of an institutional paper, THE KANSAS INDUSTRIALIST rises, meekly, to inquire, "Shall the People Rule?"

With the official report that the average savings bank account in the United States is \$445.22, it becomes a duty to announce that only the last two figures apply in this office.

Old Timer.—"Making cuttings," mentioned in the forestry circular, has nothing to do with the subject you mention. Neither is it true that a Certain Person took a postgraduate course in that study. He didn't need it.

A Kansas weekly recently gave three columns on the front page to an argument as to the truth or falsity of the story about "Christ Before Pilate." As might have been expected, the farmers' institute received a seven-line notice.

"Seventy odd relatives," an Osage County paper says, "attended Elder Plowman's Thanksgiving dinner." Relatives are odd as a rule, but think of 70 at one dinner! Doubtless Elder Plowman had a lot of younger plowmen, too.

No rain in this vicinity since October 3, says the *Independence Tribune*, and stock water is scarce. It will be serious if there is a freeze while in this condition. Would the *Tribune* mind telling the world what is to freeze if there's no water?

"Vie Roberts," says the *Melvern Review*, "lost the tip of his toe through the accidental discharge of a shotgun, Thursday. As Vie evidently had only one toe, according to the *Review's* dictation, the loss is deplorable. What's more, he can't kick.

An advertiser in *The Anthony Republican* announces that he has added a barber's chair to his office and will cut your hair or shave you or list your land or sell you a farm while you wait. Many a man has had a close shave in land deals.

ALUMNI NOTES.

Mrs. Emma (Miller) Cook, '01, is a popular teacher in the Oakley high school. This is Mrs. Cook's eighth consecutive year as teacher in the high school.

A. B. Cron, '08, and Miss Bessie Nicolet, '07, were married at the bride's home December 7. Mr. Cron is in the service of the bureau of plant industry in Washington, D. C.

George O. Green, '00, recently entertained the speakers of the farmers' institute at his home in Plainville, Kansas. Mrs. Green will be remembered as Miss Worley, a student in the later nineties.

E. M. Cook, '00, was elected secretary of the farmers' institute at Oakley. After two years as a teacher in Porto Rico, Mr. Cook turned his attention to dry farming in Logan County. He has been very successful. Mr. Cook also is an extensive breeder of Percheron horses.

R. K. Farrar, '96, now superintendent of the Colby, Kansas, high school, showed his appreciation of a farmers' institute by dismissing the boys of his school, for one afternoon, so that they might be drilled in scoring dairy cows. Later the boys attended the lecture on the "Care of the Dairy Cow," by George Hine.

Seven former students and graduates of the Kansas State Agricultural College attended the farmers' institute at Lincoln Center, November 28-29. As evidence of the active part these men are taking in scientific farming, Harold Nielsen, '03, was elected president and Wrennie Green, a junior in 1903, secretary-treasurer of the county institute.

W. A. Boys, '04, and Mrs. Boys (Dovie Ulrich), are profitably employed in practicing dry farming Sherman County. Mr. Boys is president of the Sherman County farmers' institute. This is one of the most successful and progressive institutes in western Kansas. The attendance during the two-days' session, December 7-8, was over 350. Mr. Boys is a Kharkof wheat enthusiast. He has practically all of his 1910 crop for seeding purposes.

LOCAL NOTES.

The Y. W. C. A. did not hold its usual midweek services last Thursday night.

The Aztex wore colors this week for Lee Rexroad, "Shorty" Fowler, and Ray Pollom.

Fred McKinnell, of Topeka, spent Sunday with old college friends in Manhattan.

Dr. C. M. Brink has added several new 1910 dictionaries to the equipment of the English department.

Mrs. Mary P. VanZile, dean of women, expects to write a bulletin next term about the fireless cooker.

The bacteriological department is continuing the work in soil analysis to determine the chemical effect of different plants upon soils.

E. B. McCormick, dean of mechanic arts, spent two days in Kansas City this week, purchasing supplies for the engineering department.

E. H. Webster, dean of agriculture and director of the agricultural experiment station, made a business trip to Hays December 9, returning the following Sunday.

William H. Andrews, assistant professor of mathematics, has prepared a uniform outline of grammar, history, and algebra, to be used in the sub-freshman classes.

Ray Ramage, who has been in Parkview hospital the last nine weeks with typhoid, left Thursday, last week, for his home in Arkansas City. He hopes to return to college for the winter term.

The girls' basket-ball teams are getting a limited amount of practice. The teams can practice only when the gymnasium is not used for class work, and as there are four teams the time is insufficient for best results.

Flora M. Hull, '07, secretary of the Young Women's Christian Association, will spend the Christmas holi-

days with Ethel Berry, '07, at Miss Berry's home in Jewell, Kansas. Miss Berry is teaching domestic science at Purdue University.

Vesper services will be conducted to-morrow afternoon by the Y. W. C. A. at the United Presbyterian Church. The Rev. Mr. Fisher, pastor of the First Presbyterian Church of Manhattan, will lead the meeting. This is the last association meeting of the term.

Those interested in "The Initiative and Referendum," the subject for debate with Fairmount next spring, will find some interesting figures in the issue of *The Commoner* for November 25, 1910. William Allen White, in the December *American*, also devotes some space to this subject.

Dr. J. D. Walters presented a volume of his history of the college to one of the students in the class of journalism. This volume is a fifth revised and enlarged edition. It contains many interesting facts from the time of Blumont college to last year when it was published.

Bertha M. Schwab, a member of the senior class, will leave the first of the year for Oakland, California. She will take charge of the Y. W. C. A. lunch room at that place. There is a growing demand for Mrs. Van Zile's girls for such positions, which are generally regarded as stepping-stones to more active association work.

E. H. Webster, Ralph R. Price, R. G. Taylor and L. A. Fitz attended the recent meeting of the Kansas State Historical Society at Topeka. Dean Webster spoke on the subject: "Agriculture in Kansas, Then and Now." Professor Fitz told of: "The Development of the Milling Industry in Kansas." Professor Price is a life member of the society. He was elected a member of the board of directors.

The dairy department has had a rack placed on top of the stanchions in the dairy barn. On these racks will be hung glass cases containing the records of the individual cows owned by this department. This is a welcome improvement, as many visitors and students are interested in good dairy cows and will enjoy studying the Kansas State Agricultural College dairy cows and their records.

THE JUNIORS WON WEDNESDAY.

Two to Nothing in a Fine Scrimmage—What 50 Seconds Meant.

The juniors made good their claim to the championship in football by winning from the freshmen Wednesday 2 to 0. Noel recovered one of Young's punts near the center of the field. Collins tore a big hole in the freshman line. The juniors were penalized 5 on the next play. Young punted to the freshmen on their 25-yard line. Two attempts on the junior line were unavailing. Sims punted, but VanOrstrander, the junior center, brushed through and blocked the punt, the ball bounding across the freshman goal-line. Sims beat the juniors to the ball and fell on it. Score, 2-0. This happened in the third period.

In the fourth period Sims lost his chance to put over a field goal and win the game for the freshmen. Toward the close of the game the youngsters' quarter gave up sending his back field against the impenetrable junior line and tried some end runs. Bates carried the ball 25 yards to the center of the field, leaving upper classmen scattered behind in various attitudes of recovery. Sims, behind a wall of almost perfect interference, invaded the enemies' territory for 20 more. Mossman, who played a magnificent defense for the juniors, downed Bates for a loss on the next play. Prather booted the ball over Young's head and a green one fell on it close to the goal-line. Time was almost up. Sims tried an end run and, with 50 seconds to play, walked back for a drop-kick. He gazed earnestly at the goal-posts, showing dimly in the gathering darkness, drew a line on the ground, braced himself, and looked at the freshman center. He paused to get one more look at those coveted posts, and was raising his hands for the ball when the whistle blew and the game was over. Those last 50 seconds were a sermon on opportunity missed.

DON'T WORK TO DEATH.

BUY AN ENGINE, SAYS A STUDENT, AND SAVE YOURSELF.

Incidentally You Will Brighten the Lives of the Women Folk—Some of the Joys You Miss as You Pass Along.

Did you ever come in from work, after following the plow all day, thinking how much it would rest you just to sit on the edge of the trough while the horses were drinking—and then find the trough empty?

And again, on some hot, July, Sunday afternoon when you were just ready to start on a visit to the neighbor's, didn't you hate to see the cattle line up at the trough and take up water like an irrigation ditch? Did you ever think you should like to own a pumping engine?

And do you like to turn a grindstone, or, after supper, when you are sitting in the rocking chair enjoying life, to hear: "Say, wont you do this churning?"

WHY NOT HAVE POWER?

Why not buy a power that will do these things, saw your wood, run a feed grinder, and do many other hard chores for you? Why not buy a gasoline engine? A small one is not an expensive proposition, either as to the first cost or the expense of operation and maintenance.

Don't buy the smallest size of engine, as it does not pay to overload a gasoline engine—or any other kind, for that matter. Buy an engine of a standard make—the kind of an engine that is efficient—and then learn how to run it, by personal instruction from a man who really knows engines, if possible. There should be no special difficulty in learning the principles of proper handling and caring for the engine, but there are a few facts that must be known:

WHAT'S YOUR TIME WORTH?

The day is rapidly approaching when these engines will be an essential part of the farm equipment, as much so as the farm wagon. What is your time worth, twenty, thirty or forty cents an hour or more? Can you afford to turn the crank of a grindstone, cream separator or churn, or pump water when a gasoline engine can do the work for a cent a horsepower an hour? And you don't even develop one horse-power.

Perhaps you will let the children do this work and take the place of the engine. Perhaps they will do it, but it will not help any in the movement for the "New Ruralism." Wagging a pump handle for the benefit of a herd of cattle or rotating a barrel churn will not have the effect of increasing the boy's love for farm life. But an engine—where is the boy that does not enjoy handling or watching an engine? A gasoline engine on every farm would do much toward solving the problems of rural life; it can do most of the back-aching, nerve-racking work.

WHEN THE CADETS PARADE.

You Have to Take Off Your Hat to Captain Boice's Boys.

Did you see the dress parade last Tuesday afternoon? Get a glimpse of the well-drilled 400, in the new, cadet uniforms? Were you on the terrace when the band took its position on the parade ground, the drum major almost bending backward, he was so straight? And did you see the white fur, skyscraper bonnet he wore—wasn't that some hat for you? Talk about your military formations! Perhaps those youngsters didn't march like real soldiers! Maybe the pieces didn't come down with a snap and a bang when the what's-his-name said, "Hor-dah—Hump!"

Well, maybe they didn't, but it's more likely they did. Take it from one that has seen some drilling: Captain Boice and his officers have done a fine bit of work in converting nearly 400 young men from an awkward squad into a presentable battalion that gets over the field in good order and executes the commands without creating a panic. The boys were

good to look upon, Tuesday, and their fathers and mothers and sweet-hearts—if perchance there are a few—would have flushed with pleasure to see them.

The cadets are drilling several afternoons a week, with dress parades Tuesdays and Thursdays. If any legislator or father desires to know where the soldiers would come from in case Mexico or some other country needs attention, a visit to the college campus, one of those afternoons, will answer the question.

THE CHRISTMAS DINNER.

Get Out of the Rut and Hunt Up a Few New Eatables.

The Christmas menu calls for a light breakfast, a four-course dinner, and a light supper. Wherever practicable it would be a good idea to have a late dinner and dispense with supper. Give the housewife or the hired girl a chance in the evening to enjoy a Merry Christmas.

CHRISTMAS DAY MENU

BREAKFAST		
Steamed Eggs	Grape Fruit	Creamed Toast
	Coffee	
DINNER		
Clear Beef Broth		Salt Crackers
Olives		Celery
Roast Duck	Potato Stuffing	Giblet Gravy
	Currant Jelly	
Creamed Peas	Rice Croquettes	
Parker House Rolls		Butter
Cheese	Pimento	Celery Salad
	Lettuce Sandwiches	
Angel Cake	Coffee	Orange Sherbet
Fruit	Nuts	Candy
SUPPER		
	Cream of Oyster Soup	
Peanut Sandwiches		Fruit Salad
	Tea	
Fruits	Nuts	Candy

GOOD THINGS TO EAT.

Two Especially Appetizing Salads and a Sauce You May Like to Serve.

An appetizing and attractive salad has saved the day for many a hostess. Here are some suggestions that you may find it worth while to paste in your recipe book. They were written in the domestic science department.

MACARONI SALAD.

2 cups macaroni, 2 cups cabbage, 2 cups apples, ¼ cup walnuts.

Cook macaroni in a large quantity of water, drain and cool. Cut in inch pieces. Slice cabbage, slice apples, break nut meats in fine pieces; mix well together. Use a sweet lemon sauce or boiled dressing. Serve on a lettuce leaf.

BEAN SALAD.

Boil beans, any kind, until tender, drain and cool; use only those that have kept their shape. Chop small quantities of onions, olives, and parsley; add to beans and serve with cooked dressing.

LEMON SAUCE FOR SWEET SALADS.

1 egg, 1 cup sugar, 1 cup flour, 1 lemon, 1 cup water.

Heat liquid in double boiler, mix sugar and flour, pour hot water over it; cook it ten minutes, add lemon juice, then well-beaten egg. Add one cup of whipped cream just before serving.

FOR THE FIELD \$782.40.

Since November 10 the Contributions Have Amounted to \$45.

President Waters reports the total cash contributions, last Thursday, to the fund to construct the new athletic field at \$782.40. The cash receipts since November 10 are:

Stella Ballard, '10	\$25
Alfred H. Baird, '07	5
G. D. Noel, '09	10
A. G. Phillips, '07	5

One of these contributors, Mr. Phillips, has given \$5 for the third time.

Whipped!

The sophomore class basket-ball team made the journey to Clay Center last week and were soundly drubbed by the Clay Center high school team. The score was 55 to 35. Three hundred high school rooters saw the game. Roy Meyers was referee.

The Clay Center team won the high school state championship last year, and the sophomores report that it should duplicate the trick this year.

A WAY TO SAVE GUMBO.

DOBE OR HARD-PAN YIELD TO THE INFLUENCE OF DRAINAGE.

Nothing the Matter With These Soils If They Are Properly Handled—the College Has a Man Who Knows Them Thoroughly.

If any farmer desires to know how to stick \$30 in the ground, draw out that amount every year, and have the \$30 grow to \$100 or \$150, the Kansas State Agricultural College will tell him. The college will even go that one better. It will send an expert to see that the \$30, and as many more dollars as may be desired, are stuck in the ground in the most approved way.

Here is the plan: Take an acre of worthless hard-pan or gumbo land too wet to grow water lilies, plant the \$30 in the form of tile. Thirty to 40 bushels of wheat or 50 to 60 bushels of corn can be raised on this same acre the next year. Repeat this for every acre and a farm is drained, every farm and a township is drained, every township and a county is drained.

Don't be afraid of gumbo soil. It is worth as much as any soil when properly drained, and its fertility lasts longer. Drained, it is good for wheat, corn, oats, or alfalfa.

HARD-PAN'S ALL RIGHT.

Hard-pan, another bugbear, crumbles and breaks in small particles when properly drained. Water then passes through the soil more readily, and air has a chance to circulate.

This aids in the breaking up process, and in a short time the mechanical condition of the soil is improved. The plant-food is freed, and good crops may be grown, where before a crop on such soil was more or less a joke and care given it was wasted energy.

H. B. Walker, an expert drainage engineer, has been employed by the Kansas State Agricultural College in the extension department. He will assist farmers of the state in drainage troubles and give expert advice. How shall Bill Smith proceed if his south 80 is too wet to grow corn or alfalfa? When Mr. Walker learns the conditions surrounding this 80 acres, Mr. Smith will be told the probable expense, kind of tile to use, and how to lay it. If necessary, Mr. Walker will supervise the work. The cost of this service will be the hotel bill, and car fare of the expert, while employed at the farm.

WHEN ALL JOIN HANDS.

If several neighbors are having trouble with wet fields, or possibly several thousand acres are too wet to farm successfully, it then is necessary to dig a ditch big enough to carry off the water emptied into it by the smaller laterals of the several farms. It then becomes the problem of a township, and instead of one farm with a natural ditch there is a creek.

Drainage experts say that, compared with drainage laws of other states, the drainage laws of Kansas are lax. This is due, perhaps, to the fact that not a great deal of drainage has been done in Kansas in past years. The laws covering the subject and full directions may be had upon request to J. H. Miller, superintendent extension department, or H. B. Walker, in the same department. Some of the richest land in southeast Missouri is drainage land, reclaimed from waste.

VISITORS FROM CHAPMAN.

Thirty-Five High School Girls Spent a Profitable Day Here.

Thirty-five girls from the Dickinson County high school, Chapman, Kansas, visited the college last Saturday chaperoned by Lotos Tanner, instructor in domestic science. The girls spent the morning in the Domestic Science and Art Building, dividing their time between the domestic science and domestic art departments. Miss Enyart arranged a basket-ball game for their benefit in the afternoon at the Women's Gymnasium. They also visited the shops, barns, and printing department, and allowed Miss Barnes to show them the mysteries of the library and its cozy alcoves.

WHAT TO DO FOR BEES.

DON'T LEAVE THEM ON THE SUMMER STANDS THIS WINTER.

Be Sure to Give Them Pure Food, Too! It's Important—The First Honey or Good Sugar Syrup Is Desirable.

Bees can be wintered in almost any climate where the summer is long enough to gather a winter supply of honey. As soon as cool weather arrives bees cluster closely together on the empty comb just below the honey. These clusters of bees are imbricated like shingles of a roof, one bee having its head under the bee above him and so on to the bees within reach of the honey. These pass the honey to the bees below and they to the next and so on to the bees in the lower part of the hive.

They maintain a summer temperature throughout the winter. If the temperature becomes lower they begin a quivering motion which develops heat, and the bees from the inside of the cluster exchange places with those on the outside. It is a good plan to cut holes through the comb so they can pass easily to their living spaces between the comb; otherwise they are likely to become chilled when passing above or below the comb frames.

The quality of bee food is very important. Honey that is unripe or sour or contains extraneous matter is injurious and likely to cause sickness. The purest saccharine matter is the best. The first honey of the summer season is most desirable. If the bees haven't enough of this they should be fed good sugar syrup.

It is a poor bee-keeper that will leave his bees on summer stands all winter, except where the temperature is moderate throughout the year. The colonies should be made populous, and rich in stores of good food. Small colonies are more likely to perish and, proportionally, consume a larger quantity of food than does a large colony.

Queenless or small colonies can be united easily and profitably. If the colonies are far apart they should be gradually drawn close together to familiarize the bees with their new location. They will unite more peaceably if sweet-scented water is sprinkled on them. A slanting board should be put on front of the entrance in the new location to show that their home has been changed, and the other hive should be carried away.

FRESHMEN WON THE GAME.

Six to Nothing the Result of the Underclass Meeting Last Saturday.

The freshmen won the underclass championship, Saturday, 6 to 0. Pol-lom, playing safety for sophomores, came in on Prather's punt, but the ball bounded past him. Cartswell, the freshman center, got the oval on the run and raced 35 yards for the touchdown that won the game. Prather kicked goal. All this happened in less than two minutes after the game started. Hopper, freshman end, had fumbled the kick-off, but recovered on the 30-yard line. Bates was given the ball, but failed to gain. The second attempt on the sophomore line was also barren of results. Then came the play that beat the sophomores.

Prather returned the next kick-off 25 yards, and the battle was on again. Both sides were forced to punt repeatedly, the freshmen gaining on every exchange of punts. Both sides were penalized frequently, the freshmen again attracting the most attention. The first period ended with the ball in the possession of the green ones on the sophomore 35-yard line, third down and 7 to go.

The second period was in sophomore territory most of the time. Baker, sophomore half, got away with a punt once for a 30-yard run, taking the ball to the center of the field, but the ball went to the freshmen almost immediately on a fumble. Moss got in two good gains for them; Prather punted over Pollom's head. The seconds took a brace and started up the field from their own 20-yard line. Shuster, full, and the speedy Baker doing the brunt

of the work, they carried the ball to the center of the field on straight football. The period was over. Baker, Shuster, Haylor and Norlin did the consistent work for the sophomores in this quarter, with Prather, Moss, Bates and Sims starring for the freshmen. Bates was certainly right, and punctured the sophomore line for good gains. The freshman back field worked together the best of any class team this season. Excellent work by Anderson on end was all that kept the freshman backs from getting away for long gains.

The sophomores started out like world beaters the third period, but were unable to keep up the pace. The ball seesawed up and down the field the rest of the game, the freshman backfield being good enough to keep the ball in sophomore territory a large part of the time, but not strong enough to get within striking distance of the goal. Dubois came to the front for the sophomores at end, and made several pretty plays on defense.

Some first-team material for next fall was brought to the attention of the rooters. Bates should undoubtedly make a good showing in the college back field. Prather runs an excellent interference, and gets off his punts in good shape, giving his ends plenty of time to get down under them. There were generally two men waiting to tackle Pollom as soon as he caught the ball. A little black-headed fellow by the name of Moss, who has been a thorn in the side of the first-team squad all fall, may be a trifle light for the college team, but he plays football all the time he is on the field, and the man that beats him out for an end next fall is going to have to play to the limit. Anderson excelled at breaking interference, but did not get down under punts as well as did Moss for the freshmen.

The freshman team was much the better of the two. The back field got off quicker, ran better interference, and played together better than that of the second-year men. Baker was fast when he started, but the sophomores were slow at putting the ball in play.

Nelson Crawford's Prize Essay.

A recent issue of the *Iowa Journal of History and Politics* contains an article written by Nelson Antrim Crawford Jr., assistant in the English department. It is a treatise on the old county judge system of Iowa and has especial reference to Pottawatomie County. Under this method of government the county judge was an autocrat, exercising all the important powers possible in county rule. But inefficiency and corruption necessitated the abolition of this system in 1861, ten years after it was introduced.

Prof. Crawford's article won the prize offered by the Iowa Society of Colonial Dames for the best essay on Iowa history. It has been highly commended.

Extension Lecturers Busy.

George Hine, of the extension department, and Miss Ula Dow, of the domestic science department, are out holding two-day county institutes on the Rock Island. They are at Phillipsburg and Smith Center this week. They will be at Belleville, Mankato and Clay Center next week. Miss Frances L. Brown and P. E. Crabtree left last week for a long institute trip. They will be gone nearly three weeks. They are holding two-day county meetings. They hold meetings this week at Olathe and Paola; next week at Effingham, Troy, and Hiawatha; the next week at Seneca and Holton.

The Call of the Soil.

L. E. Call, assistant professor of soils, accompanied by Mrs. Call, left yesterday morning for Alma, Kansas, where they are on the program of a two-days' farmers' institute. Prof. Call will talk on "Maintaining Soil Fertility" and tell of some of the college's recent experiments in corn planting. Mrs. Call, a former instructor in the domestic science department, will talk about bread making. O. E. Reed, assistant professor of dairy husbandry, will explain silos and silage, and discuss "Problems in Farm Dairy-ing."

DON'T KILL THE MOLES.

THINK A BIT BEFORE YOU SET THE TRAP FOR THIS ANIMAL.

Don't Overlook the Fact that Moles Destroy Centipedes, Cutworms, and Many Other Insects that Are Dangerous—What Examinations Proved.

If you had your choice, which would you take: a mole or a centipede? How's that? A mole? Sure. Are these little moles more detrimental to farmers than centipedes, cutworms, grubs, beetles, and other insects and worms that live in the soil? You should consider this question before setting traps or putting out poison that will kill the moles.

The popular belief that the principal food of the mole consists of potatoes and the roots of farm plants has been proved to be erroneous by the experiment station of the Kansas State Agricultural College. In fact, the opposite has been proved to be true, for out of the 100 moles that were examined there were only 43 whose stomachs contained any trace of plant fiber or rootlets, and in these only small amounts were found. Their food consists almost exclusively of insects and worms found in the soil.

Probably the most remarkable thing revealed by the examination of the stomach contents was the large numbers of centipedes found. Of the 100 examined 25 contained centipedes, and in these 25, 42 centipedes were found; one contained four and several two and three apiece.

The damage to farm crops charged to moles usually is due to the activities of rats or other animals that gnaw, such as field mice, shrews, etc. These follow in the runways of the moles and do the damage for which the mole is blamed.

There is one place, however, where the mole cannot be tolerated. This is in parks or lawns. Here the mounds or runways spoil the appearance of the surface. A good way to keep moles out of these places is by frequent leveling with a heavy roller. This also prevents injury to the plant roots.

The moles found in Kansas are not hibernating animals—one that spends the winter in seclusion—as many persons believe, but they are more or less active in all seasons. But it is in wet weather that they are most active in making new runways and repairing the old ones. Some of these runways are 500 feet long.

TWENTY-TWO ARE WISER.

That Many Took the Three-Day Course in Cream Testing.

Probably the shortest of the short courses offered by the college was in session this week. Twenty-two farmers and cream buyers spent Tuesday, Wednesday and Thursday attending the three-days' course in cream testing conducted by O. E. Reed, assistant professor of dairy husbandry. These men took the state examination on cream testing given by D. M. Wilson, state dairy commissioner, Friday. A law requiring all cream buyers to test the cream bought, and that to be tested by a man licensed by the state dairy commissioner, went into effect last January, hence the examination and the short course preceding it.

The Death of Mrs. George Rogers.

Mrs. George Rogers, mother of Dr. Burton R. Rogers, veterinary department, this college, died Tuesday morning, December 6, at her home in Ames, Iowa. Dr. Rogers was with his mother when she died. He has written to *The Kansas Industrialist* asking it to thank the friends, the students in his department and the teachers for the flowers and expressions of sympathy. The funeral of Mrs. Rogers was Friday afternoon, December 9.

Fifty Dollars for Candy.

The one hundred and fifty pounds of candy that the Y. W. C. A. girls put on sale last week at their annual bazaar lasted until shortly after the beginning of the third hour. Fifty dollars of the hundred and fifteen that the association cleared came from the candy sale.

COMING TO THE Corn Show?

The big December gathering of farmers who grow the kind of corn that makes Kansas famous the world over.

Premiums Worth \$1,000

Entries for the National Corn Show are made in this meeting. How many prize winning ears can you grow?

The last week in December

In the State Agricultural College buildings. The Kansas Corn Breeders Association in charge. Noted speakers will entertain the visitors with timely talks.

Information about exhibits may be obtained from

E. G. SCHAFER, Secretary,
Manhattan, - - Kansas

HOW TO BEAT A TRUST.

THE FARMERS CHORUS: GET YOUR OWN LITTLE LUMBER MILL.

Along the Creeks of Kansas When the Work of Fall Is Done, the Traveling Lumber Cutter's Busy Season Has Begun.

Did you ever think of a scheme to get ahead of the lumber trust? Perhaps, like most persons, you merely chalked it up to the tariff and providence and paid the price, if your bill was large.

Well, the farmers on the creeks of southeastern Kansas don't quit so easily. And what is more, they have solved the problem of the lumber bill.

On some farms, on almost every creek, may be found the sawmill that aids in the reduction of the building expenses, and this is the time of year when it is in operation. For, after the corn shucking is finished the next thing on the schedule is to haul some logs to the mill.

SAVING THE ODD ENDS.

The farmer does not measure his annual lumber cut in millions of feet. Probably he will not haul over a few thousand feet, but that amounts to something with native lumber at \$25 or more a thousand. And he does not cut clean and destroy a lot of young trees. But the tree that has fallen into the creek he rolls out on the bank and hauls to the mill. The tree that died, the tree that is ripe, or the one that for any reason is undesirable, is cut down and hauled to the mill.

The farmer practices the conservation of the natural resources, the high economy. The lumber he will use to make the small but necessary repairs around the farm, and keeps the price of the lumber bill in his pocket.

The farmer may desire to build a barn. Perhaps he can use 75,000 feet of lumber. In that case the lumber mill moves to his farm and the logs have to be transported only a short

distance. Native lumber may be used for everything except the siding and roof. Oak makes the best of dimension timbers and hickory, elm, walnut and hackberry may be used in almost any protected place.

A BUSY ENGINE.

Now the mill would not be rated as "large" by a lumberman. It is what the lumber mill manufacturing companies call the "light plantation" type, with probably a 48-inch saw. And the engine is not a stationary affair with hundreds of horse-power. It is the same engine that, earlier in the season, furnished the power to thresh the grain along the creek and drag the heavy separator from farm to farm. Now it is used to saw the lumber. With this outfit three or four men will saw an average of 3,000 feet of lumber a day which, at \$6 a thousand, is not so bad.

The mill will run for a few months; saw several hundred thousand feet of lumber; furnish employment in the "slack" season for the hands; make a profit for the owner, and save a large lumber bill for the farmers. And it will repeat the process next year.

COL. TODD IS TO RETIRE.

After 37 Years in the Army an Alumnus of '72 Goes Abroad.

Albert Todd, colonel, United States Army, a graduate of the Kansas State Agricultural College, class of 1872, and of the United States Military Academy, class of 1877, will retire from active service February 1, 1911, upon his own application after 37 years' service. Col. Todd and Mrs. Todd sailed for Europe last Saturday, December 10, to be absent several months. Upon their return they are to live in Washington, D. C. Col. Todd's address will be Hotel Bonnivord, Territel-Chillon, Switzerland.

Dean Brink Entertains.

Dr. Clark M. Brink and Mrs. Brink entertained the faculty of the English department, and their families, at dinner Tuesday night.

THE KANSAS INDUSTRIALIST

Volume 37

Kansas State Agricultural College, Manhattan, Saturday, December 24, 1910

Number 13

WHY SHIP YOUR WHEAT?

HAVE IT MILLED IN KANSAS AND ADVERTISE THE FLOUR.

The Kansas Product Is Little Known in the East and Is Quoted Too Low—as Good as Any That's Made.

Thirty-two per cent of all wheat grown in Kansas is shipped out of the state to be ground into flour! Think of it! For the season of 1908-'09 the Kansas wheat crop was 80,958,740 bushels. Of this amount only 55,344,325 bushels were milled in Kansas. The remainder, or thirty-two per cent, went out of the state, benefiting other states at the expense of Kansas.

"Every sack or barrel of Kansas flour," says Henry J. Waters, president of the Kansas State Agricultural College, "should bear the word 'Kansas' stamped upon it."

Kansas produces more winter wheat than any other state. Why is it milled in other states? Can't Kansas mills handle the big crop? Of course they can, and here are the figures: There are over 245 mills in Kansas, with a total capacity of more than 98 million bushels. The crop of 1908-'09 was 80 million bushels. The mills are more than capable of handling the output of the Kansas wheat fields. In 1908-'09 the Kansas mills ran only 57 per cent of their total capacity.

If the cause is not the inability of the mills to handle the crop, what then is the reason that Kansas wheat is ground outside the state? Simply because Kansas flour is not advertised as it should be. The proper demand that Kansas flour deserves has not been created. People do not hear enough about it.

L. A. Fitz, who has charge of the milling department at the Kansas State Agricultural College, says that in a recent trip to Chicago he found that a majority of the people knew nothing about Kansas flour. They did not know where Kansas flour was to be bought.

Kansas flour is just as good as any other flour, but it is quoted at a lower price than that of some other states because the proper demand for it has not been created. Take Minneapolis flour, for instance: December 7, at the Boston market, Minneapolis standard patents were quoted at \$5.75 to \$5.85 a barrel of 196 pounds. Kansas patents were quoted at \$4.75 to \$5.25 a barrel. The Philadelphia market quoted Minneapolis straight flour at \$4.75 to \$5 a barrel and Kansas straight flour at \$4.50 to \$4.75 a barrel. On the London market 28 s. 6 d. to 30 s. 6 d. was asked for Minneapolis patents and 27 s. 6 d. to 28 s. 3 d. for Kansas good patents.

This difference in price is because Kansas flour has not been advertised. It should command prices as high as any other flour.

CARE FOR THE WOODLOT.

Every Farmer Should Produce His Own Posts and Some Lumber.

Did you ever think of the possibilities of forestry in Kansas? Do you know that from \$50 to \$100 an acre is paid for land in some sections of western central Kansas that will be planted to trees as a commercial proposition? Did you ever hear of a large commercial plantation of catalpa trees near Hutchinson that is producing a net annual return of over \$25 an acre? Lumber and posts are expensive. If you own a farm you use both. Don't you believe you should give the woodlot, if you have one, the best of care?

Along the creeks and on the hills of the eastern part of the state considerable timber may be found. If the principles of forestry were applied to the management of this timber it would increase rapidly in value. In

cutting timber always try to remove the undesirable species and the crooked or ripe trees, if possible. For example, don't cut the straight oaks or walnuts for fire-wood. Use the elm or hackberry or the crooked old walnut whose only possible service to the world will be for fire-wood—or to fill space.

And cut those wild grapevines and poison vines. They handicap a tree in the race of life. Poison vines and grapevines do not have a high commercial rating.

And if you desire to get in a sawmill and "saw up" some of the logs, do not let the hands "rip up" the small trees as they usually do. It is not necessary, and it will damage the

AN ENGINE DISPLAY, TOO.

DEAN McCORMICK ADDS AN ATTRACTION TO THE STATE INSTITUTE.

Lectures and Demonstrations December 27 to 31 of Inestimable Value to Farmers—Motor-car Engines and Tires to be Shown.

This is the day of engines on the farm. For that reason, special arrangements have been made for a display of nearly all the engines used in agriculture, in the forthcoming state institute meeting at the Kansas State Agricultural College. In some parts of western Kansas horses have been almost supplanted by gasoline motors. Engines are doing the pumping, the

to care for them. The average motor-car carries a set of tires worth from \$200 to \$300. Manufacturers say that with proper care the life of a tire can be increased 50 to 100 per cent. One manufacturer of tires will bring to the college a full set of samples, showing the entire process of manufacture, how to apply and how to remove them, how to repair them, and how to judge the air pressure carried in the tire.

Particular interest attaches to Dean McCormick's program because of the fact that farm boys are turning with increasing interest to the study of engines of every kind, but particularly, of course, to those engines used upon the farm. Farmers are using motor-cars nowadays for more purposes than riding. Already, the motor-car manufacturers say, many motor-cars have been thrown into the junk heap with the old-fashioned plow. Every boy that leaves the college and goes back to the farm takes with him the knowledge of how to operate motor engines and all the other engines of the farm. The display during the institute meetings is expected to arouse much interest among the 1,500 visitors expected.

FOR THE VISITING FARMERS.

The Y. M. C. A. Will Keep Open House While the State Meeting Is On.

The farmers who attend the farmers institute will find the Y. M. C. A. an attractive headquarters. A limited number of the rooms will be open, and there will be boarding accommodations for sixty in the dining-room. The list of rooming and boarding places will be kept there. Moreover, the Y. M. C. A. offers the privileges of the gymnasium and shower baths and reading room free. The "gym" floor will be open from 10 a. m. until 9:30 p. m. every day in the week, except Tuesday—the day of the "farmers' dinner." Volley ball, basket-ball, hand ball and indoor baseball will be played between sessions of the institute.

O, the Things They Waste!

The *Downs News*, in writing up a \$51,000 farm and personal property sale, says that a pile of manure sold for \$14. Not many farmers would have thought of either buying the manure or offering it for sale.

The Work of Agricultural Colleges.

In no line of rural betterment has so much progress been made in America as in our magnificent agricultural colleges, through farmers' institutes and especially through the experiment stations.

—Kenyon L. Butterfield, member Roosevelt Country Life Commission.

The New Farmer.

Agricultural colleges have forced progress upon the farmer. It is indeed "a struggle for life," and out of it comes "the survival of the fittest," and the fittest is the new farmer.

—Kenyon L. Butterfield, *Chapters in Rural Progress*.

woodlot for many years to come. Remove all the old and crooked logs. In short, use good, common-sense methods with the farm forest and it will increase in value and beauty as the years go by.

WORK IN THE GREENHOUSES.

Not Show Places, but Plots for Winter Experiments by Faculty and Students.

The new greenhouses comprise six divisions under one roof. Three will be used by the horticultural department, one by the botany department, one by the agronomy department, and the other by the entomology department.

The horticultural department will use the three divisions apportioned to it for winter gardens and other experimental work along the same line. The plantings will be changed from time to time during the winter and reports made of all work done. The other departments will use their sections for carrying on experimental work during the winter on station problems. There are to be spaces, also, where the students may experiment for themselves.

The department of botany already had some work in the new greenhouse, but the heat had not been turned on and everything was frozen. The dirt and sand that is to be used in filling the beds is being hauled and spread in the boxes.

ARTISTIC MOTTOES, THESE.

The School of Printing is Turning Out Some Exceptionally Good Work.

Some exceptionally artistic mottoes have been turned out recently by the school of printing. The decorated borders, done in several colors, were made in the art department. The mottoes may be framed, and when so preserved are worthy of space in any home. For the most part they are short, snappy sentences, pointed and expressive. Some of these are: "Some men grow under responsibility, others merely swell;" "The Lord freezes the water, but we are expected to cut our own ice;" "Whatever success comes to you will make me glad."

AN INQUIRY FROM PERU.

Two Boys Now in an English School May Be Entered Here.

A letter has been received from S. Chaloner Cowper, of Peru, South America. Mr. Cowper desires to know something about the work of the college, the cost of attending, and the student life. He has two sons in school in England. If he is favorably impressed with the work of the Kansas State Agricultural College it is probable the boys will enter here next fall.

THE DAIRY GROWS ALSO.

LABORATORY CLASSES NOW WORKING IN A BASEMENT.

A Makeshift Resorted To So That An Important Department Can Continue Its Operations—What the Students Are Doing.

Like nearly all the other branches of the college, the dairy department has outgrown its building. The old assembly hall has, therefore, been once more called into service, this time as a class room. Even the basement rooms, unpleasant though they are, have been turned into laboratories.

The department of dairy husbandry formerly had only one professor and an assistant. Now there are four assistants and two foremen. E. H. Webster is at the head of the department, with O. E. Reed as assistant professor and acting head. A. W. Rudnick is the assistant in dairy testing.

The work this department does is important. When you buy creamery butter now you run no risk of swallowing a rubber button. No longer need you hold your breath when the butter plate passes beneath your nose. For all of which give thanks to the "educational butter-scoring contest" recently started by the dairy husbandry department of the Kansas State Agricultural College. Butter makers all over the state enter their products in this contest twice a month, and receive awards in praise or censure, rather than in copper medals.

A CREAM CENTER HERE.

The college creamery was established with a view to making it pay its own way, and at the same time to give the students instruction in commercial dairying. Now, Manhattan is a center for cream producers. The department now has a motor-truck, which has regular routes for gathering cream. As a result, more interest and time is given to dairy stock in this district.

More attention has been given this year at the college to the production side of dairying. The big barn has been remodeled and made absolutely sanitary. The old herd has been replaced by pure-bred stock all in advanced registry. This herd is now giving a profit. In order to further the interests of this production side of dairying, a seventy-acre farm has been acquired by the department. Fifteen acres is used for pasture. The remainder is cultivated. The intensive method of dairy farming is practiced, to show the students what can be done with a small farm in dairying. Seventy head of cattle soon will be kept upon this land with no expense for feed except that of buying grain.

THE THINGS THEY DO.

The proverbial cranberry merchant has found his match at last, for the men in this department, the dairy experts, besides their other work are carrying on numerous experimental investigations. Among those already completed are: economical feeding and nutriment requirement; precipitation of casein from buttermilk; testing of cream by Babcock method; acidity of fresh milk; composition of milk influenced by the feeds; loss of moisture in butter; artificial starter making, and efficiency of cream separators under farm conditions. At present an extensive nutrition experiment with dairy cattle is being conducted.

And There Was Light.

The night watchman has a new pocket flash-light. This will be a sad blow to those who participate in evening strolls on the campus.

Such a Talking.

The literary societies had charge of the chapel exercises last Tuesday. It reminded one very much of the annual oratorical contest.

Capt. Shaffer a Visitor.

Pearl M. Shaffer, captain twenty-fifth infantry, U. S. A., and commandant of the cadet corps of the Kansas State Agricultural College in 1903-'07, was a college visitor recently. Captain Shaffer is stationed at Fort Lawton, Washington. He has a three-months' leave of absence and is going to Iowa to see his sister who is ill.

The Farmers' Dinner Dec. 27.

At least 450 farmers will be guests at the Y. M. C. A. dinner, Tuesday night, December 27. More requests for places have been received than can be granted. Governor W. R. Stubbs and some of the college professors are to speak.

Made in Germany.

The domestic science department received two boxes of enameled cooking utensils from Germany last week.

THE KANSAS INDUSTRIALIST

Issued weekly during the college year by the Kansas State Agricultural College, Manhattan, Kansas.

PRES. H. J. WATERS, Editor-in-chief
PROF. C. J. DILLON, Managing Editor
DR. J. D. WALTERS, Local Editor

Except for contributions from officers of the college or members of the faculty, the articles in THE KANSAS INDUSTRIALIST are written by students in the department of industrial journalism, under the direction of Prof. Charles Dillon.

The typesetting and other mechanical work is by students in the school of printing, of which J. D. Rickman is superintendent. Both these departments are in Kedzie Hall.

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A VOTE OF CONFIDENCE.

An educational institution, whose officers, from the nature of their duties, have no political schemes to foster; whose only platform is an earnest and praiseworthy determination to give the best returns for the money they spend; who have no other personal ambition to serve and no pecuniary loss to face; whose salaries go on under one political party as under another—such an institution, founded by the national government and entitled to adequate support by the state, finds itself handicapped and its usefulness seriously impaired by ill-advised criticism of its estimates. This is criticism that might entail the vote of no confidence and take from the people an educational element important in the development of its best interests. To be without the means of performing properly the great work for which it was established places upon such an institution a stain that years might not remove.

THE KANSAS INDUSTRIALIST intends to do what it can to convince the people of Kansas—including the legislature—that the reviewing authority did not have information sufficient to warrant curtailment of the board's estimate. It will try to show, in succeeding issues, by proof of exceptional activities in the people's interest, that a complete and unbiased investigation of the carefully prepared plans of the agricultural college would call for a far more liberal appropriation than the president and the board of regents had requested.

Will the accredited representatives of the people make this investigation? Will they accept the invitation to come, individually or in a body, and learn, at first hand, exactly what the state's big technical school of agriculture is doing—see for themselves why 2,400 students are packed into class rooms and into attics and basements?

Why not come to Manhattan and decide for yourself, Mr. Lawmaker, whether the officers and regents of the college are competent to say what the college needs? It isn't far from Topeka. The project is mighty. Six hundred and seventy-five young women in the domestic science course, learning to care for the homes of such as you, and nearly 2,000 young men fitting themselves to be modern, farmer-citizens, will be object lessons certain to impress you favorably. Keep your eyes on Manhattan, Mr. Lawmaker.

FOR VALUE RECEIVED.

It costs money to teach agriculture. Industrial and technical subjects are the most expensive of all subjects. A large outlay is required for equipment. Teachers in these subjects usually can command large salaries in practical lines, and are, therefore, hard to hold in college positions. The classes must be relatively small. A class in a purely lecture subject may number a hundred, or even two hundred, but good instruction cannot be given by the laboratory method to more than thirty students at a time. In agriculture, mechanic arts and domestic science the students are taught almost entirely by the laboratory method. That is, they are taught how to do things by being taught to do them.

An educational institution, of any sort, to meet the demands of to-day,

cannot stand still—it must go either forward or backward. Moreover, an institution like the Kansas State Agricultural College is called upon constantly by those interested in agriculture or the industries to render a larger and more definite service. What, ten years ago, constituted a successful agricultural college would to-day be a small and unimportant institution indeed. The demands of the immediate future promise to be as large and important as have been those of the recent past.

For the first time in history, such fundamental problems as the world's food supply, the conservation of natural resources, and the revitalizing of the country church, the rural school, and indeed country life, are made the special problems of the agricultural college.

The farmer no longer attempts to work out his own difficult problems, but refers them to the experiment station. Thousands of farmers cannot avail themselves of the opportunities the college offers by studying at the college, but they rely upon the farmers' institutes, the demonstration farms, the instruction trains, and the reading courses, for definite instruction and guidance. The losses from several of the animal diseases, which formerly mounted into millions of dollars annually, are now being prevented by the serums produced at the agricultural college.

The amount and kind of service the people of a state may expect from their agricultural college will be definitely gauged by the financial support accorded it.

The college has asked for \$550,900 for 1911-'12 and \$555,900 for 1912-'13. It has a right to expect that much. If the 2,400 students of the year were to be provided for properly a much larger amount would be needed. Is Kansas to continue crowding its boys and girls into inadequate quarters? How long will it be necessary to have some of the classes outdoors and some in basements?

THE BREAD AND BUTTER.

All general expenses connected with the college, including salaries of teachers and employees, lighting and heating the buildings, freight, care of the campus, postage, etc., are paid from the maintenance fund. It is the bread and butter of the institution. The amount set down is conservative, and has been considered the least upon which the college can operate without seriously crippling its efficiency. The proportionate increase in this fund is less than in former years.

The cost to the state per student is much lower in the Kansas State Agricultural College than in any other college of its size and quality in the country. This, notwithstanding the fact that industrial education is the most expensive possible to devise.

For this purpose the board of regents has asked \$200,000 for 1911-'12 and \$220,000 for 1912-'13.

You can't operate an engine without coal. If you try it you'll find it dead.

FALL PLOWING IS FAVORED.

Proper and Timely Treatment Will Increase the Yield.

Fall plowing for corn, the Kansas State Agricultural College experts say, has been found to increase the yield. When ground is plowed in the fall, it has time to settle and will make a much firmer bed for spring seeding. Especially is this so if manure or a large amount of vegetable matter is turned under. If this vegetable matter is not turned under till spring the land will not settle and as a result capillary action will be cut off. Capillary action is the upward movement of water through the soil particles. When capillary action is cut off and it is a dry spring the sprouting seed will get very little water.

With fall plowing the land will catch and hold the winter snow. The alternate freezing and thawing of winter, also, has made the land friable and easy to work in the spring.

Manure may be applied to fall-plowed land in small amounts and not interfere in any way with the planting or cultivation of the spring crop.

A FARM BOY'S WISDOM.

Rural Schools, He Says, Should Be Social Centers—Teach Agriculture.

"God knew how to make a man," writes one of the students of industrial journalism, "when he put a hand on each side of him and a head on top. These factors must work together and must be educated together."

"Modern education demands a new sort of a schoolhouse. By uniting a few districts the patrons could afford a much larger building. Not merely a building with more rooms in it, but one furnished with laboratories and apparatus that would enable the pupil to do much better work than is possible under the present method. The schoolhouse should be the social center of the community, and one way to make it so is to have a building so large that the second floor could be used as a hall in which to hold public meetings, socials, etc. Every community has enough land so that it can afford a few acres for an agricultural laboratory or experiment station where the pupils could carry on experiments with growing crops."

"For a school of this sort it would be necessary to have a new sort of teacher, one that could not only teach the subjects now commonly taught, but who could teach also the processes of nature, explaining the growth of plants, etc."

It follows, too, that there will be a new sort of farmer. Instead of rural life being a drudgery it will be full of enterprise, intellectual energy and interest.

A Golden Text.

Cast in thy lot among us; let us all have one purse.—The Proverbs, 1:14.

DAIRYMEN ARE ORGANIZING.

By Keeping Records, D. M. Wilson Says, the Farmers Save Money.

Organization is the key-note of dairy improvement in Kansas. As a step in this development, D. M. Wilson, state dairy commissioner, has organized three herd associations. A cream agent in the district in which the association is formed keeps all the records. Twenty or thirty farmers are members. Cooperation brings results, Mr. Wilson says.

About the middle of the month, the farmer weighs the morning and evening milkings of every cow, and brings samples of the milk to the cream agent. The cream buyer tests the milk for butter fat, and then, by computing from the record of three days what the monthly record is, he is enabled to record the amount of butter fat produced every month by every cow.

The monthly records are averaged at the close of the year. The system is of much advantage to the farmer, because it shows him his actual profit from dairying and the share that every cow gives.

More of these associations will be formed when money is available.

"Only this morning," said Mr. Wilson, "we had to refuse a man who desired just such assistance. We haven't a dollar to use."

So this needful work is held up until money is forthcoming.

DON'T PLANT TREES NOW.

In the Western Half of Kansas Fall Setting is Dangerous.

A revival of tree planting in Western Kansas has been noted this year. The old question of spring or fall planting is a subject of discussion at almost every farmers' institute when tree planting is mentioned. Fall planting may be practicable in the eastern part of Kansas or any other region of great humidity, but it is not a safe proposition in the western half of the state, says C. A. Scott, state forester at the Kansas State Agricultural College. Winter killing of newly planted trees is due to the drying out of the stems. This may result from alternate thawing and freezing that is common during periods of bright, sunny weather; or the trees may be killed by a day or two of dry, windy weather any time before the roots have an opportunity to make

any growth or gather food for the nourishment of the stem.

In case trees have been ordered for fall delivery they can be held over winter without injury if they are properly heeled in. To do this a trench should be dug deep enough to receive the roots; one side of the trench should be sloping and the trees should be placed with their stems resting evenly on the sloping edge. The roots, tops and all should then be covered with enough fresh earth to insure them against drying out. The soil covering the roots should be packed firmly to exclude the air and prevent them from drying out.

WHERE ORATORS ARE MADE.

How Students at the K. S. A. C. Learn to Speak from Notes.

Comparatively few persons can give impromptu or even an extemporaneous speech when called upon. It is one thing to write upon a subject, and an entirely different thing to stand and talk about it. Many persons with something to say that is interesting are compelled to listen to some one else speak who does not know as much, perhaps, about the question.

The teachers of the English department have been requiring extemporaneous speaking by the students of English. The student is allowed to choose a subject, has two days to prepare a three-minute talk, and then stands before the class and speaks from notes. While such work is disagreeable to many students, it is training in public speaking that is worth while.

THE HAPPY STUDENT AGAIN.

This Time He "Popularizes" a Bank Report That Was Exceedingly Dull.

The first chapter of Matthew and most statistics are usually of equal interest. But here are a few figures that are refreshing amid so much hubbub over the cost of living. In the year ended June 30 more than 4,000 million dollars was on deposit in the 1,759 savings banks throughout the country. The average depositor's account was \$445.22, just \$24.77 above the average of the year before. It looks as if the joke were surely on the pessimist and muck raker this time.

But wait; here's something more: There are 300,000 more savings bank depositors than there were a year ago. The total of the deposits has increased 357 million dollars in the year. Pretty fair, isn't it, in a time when, according to all the prophets, most men should be staying up nights to press their shiny trousers?

Grasshopper Turkeys His Hobby.

C. D. McCauley, '96, of Fowler, Kansas, reared and sold considerably more than half a ton of turkeys last year and incidentally won a prize of \$10 offered by the produce man to the person that brought in the largest number of turkeys. These turkeys ate almost nothing except grasshoppers, so they really were worth more than the price received for them on the market because of the grasshoppers they destroyed. Mr. McCauley also grew an excellent crop of wheat and two crops of alfalfa, the third crop of alfalfa having been left for seed in spite of the fact that this last season was exceptionally dry.

HOW TO BE HEALTHY.

The Subject Is Discussed in a Bulletin Just Issued by the College.

Every family in Kansas—and elsewhere, for that matter—will be interested in Bulletin No. 1 of the Rural Life Series just issued by the extension department of the college. Three vital subjects are discussed by men who add to their knowledge of the questions treated the ability to write interestingly and convincingly. "The Typhoid or Common House Fly," by E. L. Holton, professor of rural education; "The Country Well," by Dr. Francis H. Slack, professor of bacteriology, and "Care in Handling Milk," by L. D. Bushnell, assistant professor of bacteriology, are contained in the one bulletin. It may be had upon application to J. H. Miller, superintendent of agricultural extension.

The Modern Santa Claus.

No use to tell about the reindeer any more; Boys and girls are far too wise, I fear. "Santa Claus," my eldest said, when I came home to tea. "Is coming in a motor-car this year." "O, no," I cried, in feigned surprise, "he travels in a sled. With loads of toys for little boys like you. He'll slip down through the chimney, son, while you're asleep in bed. Just as you'd like to have old Santa do." "He's still the same old Santa Claus, with deer and fur and all. With good things for the children near and far—" "You didn't see the poster that I saw," the boy exclaimed. "I tell you Santa has a motor-car." "An' how's he goin' to slip down through a chimney like we got?" "I believe old Santa couldn't pass. Why, daddy, *nothin'* could get down that little flue!" "An', anyway, he couldn't stand the gas,"—Charles Dillon.

SUNFLOWERS.

Inward rest is a fine thing and few men ever have it.

Motor-cars may outwork horses, but it cannot be said that they are tireless.

The *Wathena Republican* should be careful in printing anything about L. A. Libel.

When a man pays a judgment in Wichita, he is "mulekited," according to the esteemed *Beacon*.

Presumably Dr. Cook's latest story of the North Pole trip may be considered the cold facts.

Every educational institution should be industrial, and every industrial institution should be educational.—*Herbert Spencer*.

Mrs. Mike Frankovich made a flying trip to Kansas City one day last week to buy herself a new buggy, says *The Wathena Republican*. This is the record flight in Kansas.

It appears, after all, that Kansas banks do not hold their own, as *The Kansas City Star* announced a few days ago. At least 27 have been robbed in the last ten weeks.

One paper naively recounts that the bank robber who wrecked the peace of Paradise, a week ago, "knocked down the cashier and tied him and then held up the bank." Not only nervy, but strong.

E. W. Hoch, editor of the *Marion Record*, and Henry J. Allen, of the *Wichita Beacon*, are to respond to the address of welcome when the editors' association meets next month in Topeka. They're droll.

"There are too many national conventions, too much conservation," says *The Salina Evening Journal*. It is now proper to refer to Champ Clark's characterization of such gatherings. The future speaker says national conventions are—well—what Grant or someone else said about war.

"Jack of all trades and master of none" is an exploded aphorism. If a bookkeeper knows, also, how to make a table or a chair and can distinguish between dobe and wood soil and recognizes a Jersey cow when he sees it, such a bookkeeper is worth several times the man that sees only a row of figures.

One of the compensations of having a newspaper in a small town: the doctors and dentists advertise. In the cities the "ethics" of the profession keep doctors from doing any advertising except to call up the papers and tell them about cases and be particularly careful about spelling the doctor's name. Ethics! Hah!

The people who live in houses, and sleep on beds, and walk on pavements, and buy their food from butchers and bakers and grocers, are not the most blessed inhabitants of this wide and various earth. The circumstances of their existence are too mathematical and secure for perfect contentment. They live at second or third hand. They are boarders in the world. Everything is done for them by somebody else.—*Henry van Dyke*.

Some Kansas papers used the better part of two columns last week for a story about ostrich farming. One-quarter as much space given to hog farming or corn or wheat or good roads might have proved interesting and valuable. And such stories cost nothing. THE KANSAS INDUSTRIALIST prints them every week. Use your scissors and paste.

LOCAL NOTES.

Joel Feitz, of Hays City, a former student, was a college visitor last week.

P. C. Vilander will represent the Hamilton Society in the oratorical contest.

The chemistry department received a large shipment of glassware from Germany last week.

O. C. McIntosh, a college student two years ago, was visiting friends around the college last Monday.

J. W. Searson, associate professor of English, addressed the Wichita Teachers' Association last Saturday.

Urfa A. Domsch was elected chairman of the senior class-book committee to fill the vacancy caused by the resignation of Oley Weaver.

Crosby Loomis, of Council Grove, Kansas, was visiting in Manhattan last Monday. He is thinking of entering college for the winter term.

Dr. Burton Rogers, instructor in veterinary science, has returned from Ames, Iowa, where he was called by the death of his mother. Mrs. Rogers will return later.

Nelson Antrim Crawford, Jr., assistant in the English department, will spend the holidays at his home in Council Bluffs, Iowa.

The janitor boys who work in the Domestic Science and Art Hall have the best of the deal. One of the instructors gave them a large cake last Tuesday.

If the domestic science department had posted its ad, "Cakes For Sale," in the main building instead of in the domestic science building it wouldn't have taken very long to get replies.

The library department has received three boxes of books from the bindery of the state printing plant. About a dozen boxes of magazines, old books, etc., were sent away last summer to be bound.

Miss Ethel Byerly received, Monday, the sad news of the death of her mother, and left at once for her home in Millersville, Pennsylvania. Miss Byerly is an assistant in the department of domestic art.

The middle section of the south half of the old greenhouse, containing the Bridesmaid roses, broke down sometime last Wednesday night. The roses have been transplanted to one of the horticultural sections of the new greenhouse.

Miss Ella Weeks' class of short-course girls in color and design has been doing some very creditable work in making baskets. These baskets are made from raffia, a straw that grows in South America. This straw is dyed to get a variety of colors and different designs.

Mrs. Mary Van Zile, dean of women, had the pleasure of a week's visit from her mother, Mrs. J. M. Van Zile and sister, Mrs. E. H. Snyder, of Denver. Mrs. Snyder was a student here in '87 and '88. She and Mrs. Snyder left Tuesday for Alabama, where they intend to spend the winter.

ALUMNI NOTES.

Mrs. Marian (Allen) Buell, '04, and T. W. Buell, '04, are located at Denton, Texas. Mr. Buell has recently been made superintendent of the state experiment station at Denton.

R. M. Wyatt, '09, assistant engineer of Atchison, came here last Tuesday to make arrangements for taking the postgraduate course. He will take architecture for his major and civil engineering for his minor work.

HOURS THAT ARE WASTED.

A Farmer Spent Two Months a Year Watering His Live Stock.

All the geldings kept on a farm, and all the mares not rearing colts, whose market value is not increasing, are an expense, not an investment. Consequently, all time required in caring for them must be counted as expense. This item of expense can be reduced by a better arrangement of feed and water. Many farmers find it convenient to put the water-tank inside the barn. It then is close and a very small

amount of time is lost in watering the horses. This can be done to good advantage especially when the well is some distance from the barn, as in that case the amount of time saved is much greater.

It does not seem that the time saved by paying attention to such details could amount to very much, but take this instance for an example. A man—a farmer right here in Kansas, too—has his cattle, hogs and horses in different pastures. He has been making the rounds every day dipping water from springs for his stock. He says it takes at least two hours a day to do the watering. This man puts in more than a day, almost a day and a half, a week watering his stock. More than two months in every year he has been busy dipping water. He has decided to put in a water system and pipe the water to the pastures and the barn. By this plan he will increase the time he has for his farm work more than twenty per cent.

CREAM TESTS VARYING?

Here Are a Few Reasons for the Sudden Changes You Noticed.

Maybe you think the man that buys your cream has been "slipping it over on you" because he reports such variable tests. Maybe you think that cream from the same cows, fed the same ration, milked by the same man and separated by the same separator should show the same per cent of fat by the tests. When sudden variations in the test are noted you suppose the test is incorrect. But the trouble probably is in the way you operate your separator.

Of course, errors are made in testing, but before you take your cream buyer to task, watch closely when you separate your cream and see if the variation in the test isn't caused by reasons that you can eliminate by carefulness. The dairymen at the Kansas State Agricultural College give these as common causes for variation in the test of separated cream:

1. Changes in the temperature of the milk.
2. Changes in the speed of the separator bowl.
3. A variation in the amount of milk run through the separator in a given time.
4. The amount of skim-milk or water used to flush the bowl when through separating.
5. Changes in the richness of the milk, either from morning and night milk or from changes in the milking period of the cows.

These five conditions will influence the test of the cream even if the cream screw in the separator is not changed. But, on the contrary, cream of uniform richness may be obtained from a separator by avoiding, as far as possible, variations in the conditions just mentioned.

HOW TO GET MORE MILK.

The Supply May Be Increased by Three Daily Milkings, the Experts Say.

Milk the cows three times a day if the present supply isn't sufficient. The hired man may howl, but you'll get more milk. The dairy department has been experimenting along these lines, recently. Six cows have been milked three times a day. The supply has increased more than enough to pay for the work; in fact, the flow of milk has been increased almost one-third.

The Joy of Living.

Wathena Republican, Palermo Notes.

Well, have you all got your corn cribs full and turnips and taters in the cellar? If you have, you are all O. K., for there are plenty of rabbits for meat until the low price of corn and high price of bacon equalize.

A Modern Job.

From The Wathena Republican.

Mr. Greub is having quite a time with himself. He has had carbuncles and boils, one after another, all fall. They say boils are worth \$5 apiece, but he says if he had \$5 for every one of his he would surely be safe from poverty.

WHAT ONE MAN CAN DO.

W. E. BLACKBURN WAS THE STRENGTH OF A FARMERS' INSTITUTE.

The Sage of Anthony, the Agricultural College and Willing Workers Were Responsible for Standard Corn Varieties and Excellent Bread.

The fine, helpful influence of one man in a community, aided by intelligent co-workers and backed by the state agricultural college, was evident, last week, in the farmers' institute at Anthony. It is extremely doubtful whether that town ever would have had an institute if W. E. Blackburn, editor of the *Anthony Republican*, had not hustled out and worked like a hired man to make it a possibility. Mr. Blackburn knew his people and

families form the source in that community whence emanates the strongest influence for better farming and better homemaking. For the last two years the Anthony institute has had a former student from the college as its secretary. His influence has been remarkable. He is breeding corn on his father's farm and is developing a standard variety. Seed that I procured from him gave the best results this year on a county farm where I made a variety test. I cannot imagine a better proof of college influence for good."

The Herald Election.

Asbury Endacott was elected editor of the *Students' Herald* at a meeting of the stockholders one afternoon last week. The other members of the staff

School for Kansas Farmers.

From the Kansas City Star.

The Kansas State Agricultural College has conducted more than two hundred institutes or conferences in the agricultural districts in the past year with a total attendance of more than one hundred thousand farmers.

The value of these meetings cannot be estimated. The knowledge gained in the experiment stations and in the scientific tests at the college covering every feature of agriculture has been taken direct to the farmers of Kansas. The spectacle of an agricultural class of one hundred thousand students ready to make a practical application of the knowledge received in these institutes ought to be an inspiration to the representatives of that state in the coming session of the legislature. The necessity for extending the work should impress the lawmakers without any further effort on the part of the school or the people for sufficient appropriations.

Kansas is fortunate in having a faculty in its agricultural school that appreciates the vital importance of getting the information gathered there to the people of the state—in taking the college direct to the farms. The proper coöperation of the lawmakers and the right conception of the purpose of the institution will result in making the college the factor that it should be in the agricultural life of Kansas.

he knew his township and its needs. Also, he knew the benefits of scientific agriculture. The results of his efforts, and the efforts of those that assisted him, must have been paid in full, last week, when the judges picked the winners in the corn contests, the bread-baking trials, and the other competitive struggles of the institute. The reports of the specialists sent to Anthony by the extension department of the college are mighty interesting.

FOR GOOD BREAD.

"The college has conducted a continuous campaign for good bread throughout the state," wrote Miss Josephine Edwards, lecturer in home economics, in a letter from Anthony to THE KANSAS INDUSTRIALIST. "In the Anthony institute bread contests have been a feature for a long time. Comparatively few entries were recorded this time, ten in two classes, I believe, but the uniformity was startling. The loaves were uniform in size, shape, color, texture, and taste. Indeed they were all good bread. Not one poor sample was seen, which is decidedly exceptional.

"The whole exhibit showed conclusively the influence of the repeated emphasis on certain characteristics that the college has insisted upon in scoring and discussing bread. But much credit must be given, too, to a very efficient committee in charge of the contest work and to W. E. Blackburn of the *Republican*, a regent of the college, whose influence has been paramount and of inestimable importance."

THE GRADUATES WON.

"A number of families in this district have sent students to the agricultural college," wrote George C. Wheeler, lecturer on farm management, which includes animal husbandry and a whole lot more important things. "When the names of the winners in the corn contest were read, yesterday, in the institute, I noticed that the list included the graduates or former students in the agricultural college living here. Prof. Jardine, who judged the corn, said correct breeding and selecting were apparent in a marked degree in the whole exhibit. This is due to the training received by the elder members of the families. In fact, these

elected at this meeting are: First assistant business manager, A. G. Strong; second assistant business manager, George Turner; reporters, Floyd B. Nichols, Clay Lint, Kate Blackburn, Edwin McDonald, Harold Thackrey, and Roy Alexander. George Ratliffe, business manager, holds his office until the next election.

THE WEEKLY MENU.

Here's a Midwinter Dinner With Pork as the Chief Feature.

If you are about at the end of your ideas for a variety in menus, try these.

BREAKFAST	
Rolled Oats	Sugar, Cream
Steamed Eggs	Creamed Toast
Coffee	
DINNER	
Cream of Pea Soup	
Celery	Apple Sauce
Roast Pork	
Browned Boiled Potatoes	Creamed Turnips
Whole Wheat Bread	Butter
Coffee	
Sponge Cake	Lemon Gelatin with Whipped Cream
SUPPER	
Scalloped Potatoes	Cheese Soufflé
Luncheon Rolls	Cranberry Jelly
Tea	
Apple Snow	Chocolate Cake

TARGET PRACTICE NEXT TERM.

A Range is to be Provided by Capt. Boice for the Students.

The cadet corps will have target practice the coming term, in the Armory. The ammunition is free and the cadets can shoot as much as they please. The target has five rings, the bull's-eye counting five, the circle around the bull's-eye, four, and so on. Five shots are allowed. To qualify as a marksman a score of twenty out of a possible twenty-five must be made. Many good marksmen are members of the cadet corps. Captain Boice expects to establish a 300-yard rifle range. The present accommodations for gallery practice are poor. The interest is not so lively as it might be.

When the new gymnasium is ready students will have a better gallery, and teams may be selected to take part in intercollegiate shooting tournaments.

A TEST TO END IN 1940

THIRTY YEARS TO TRY OUT THE COLLEGE SOIL FERTILITY.

This Experiment in Crop Rotation Will Be of Immeasurable Value to Future Generations Everywhere—A Cause of Farm Desertion.

Thirty years for an agricultural experiment! Could you, Mr. Commercial Man, wait that long for an investment to yield? It will take that many years to complete a big experiment in soil fertility now in progress on the experimental plots of the college farm—and it may take longer. Only one other experiment station in the United States has undertaken an experiment on soil fertility that attempts such far-reaching results.

L. E. Call, assistant professor of soils, says the one thing to be proved, it is hoped, is this: will land wear out—and how soon—if used for wheat, corn and alfalfa in continuous culture and rotation if no plant-food is supplied? A study also will be made of the same operation on another piece of land where plant-food is added.

A second object of the thirty-year study will be to determine whether a leguminous crop is better for green manuring than a non-leguminous crop—that is, will a legume (a plant of the bean family, especially valuable in green manuring because of the great amount of nitrogen which it returns to the soil) return more of the soil's lost plant-food than the non-leguminous plants when manured by plowing under green?

THE BACTERIAL PLANTS.

The experimenters also will study with much care the effect of different crops and fertilizers on the store of plant-food in the soil and on the little bacterial plants in the soil—the plants that live on the roots of legumes and convert the nitrogen of the air into plant-food.

Fifteen acres on the college farm have been set apart for this experiment. It is just an average piece of land that probably has been in cultivation for forty or fifty years. This area is divided into ten smaller areas called "series." The "series" are sub-divided into twelve plots. The plots contain exactly one-tenth of an acre. Hence there are 120 of these tenth-acre plots on which this work is to be done. There is room for a rotation of crops in five-, ten-, twenty- and thirty-year rotations.

One plot out of every six is called a check plot. On these will be grown whatever crop is grown on the series, but without rotation and without the use of fertilizers. The check plot is to compare with other plots of the series.

Though this big experiment as now planned will not be concluded until about 1940, results of importance will be obtained before that time. These results will be published in bulletins issued at intervals.

Many questions are to be answered by this experiment and all have to do with the problem that worries scientists and farmers: how to preserve the fertility of the soil. James Wilson, secretary of agriculture, said in the National Conservation Congress in St. Paul, last summer: "If we are to prosper as a people we must give close attention to our soils and conserve their fertility by all the means in our power. . . . Our people have been well fed and until recently they have been cheaply fed. This has been due in part, no doubt, to the occupancy of land easily obtainable as soon as the older land refused to yield abundantly, and is one of the prime causes of farm desertion that now is attracting so much attention."

Does This Boy Love Home?

From an Exchange.

Milton Cross is home from his school to spend a few days with his parents. He is entertaining a young friend and schoolmate from his school in Wichita. They are enjoying hunting trips, horseback rides, fodder hauling, and all the outdoor exercises of a farm life. When they return to their books they will be ready for their school work again.

HOW TO FARM HARD-PAN.

DYNAMITE IS SOLVING A PROBLEM THAT HAS WORRIED MANY.

Soil Suitable Only for Brickmaking May Be Turned to Other More Profitable Uses by the Latest Method—Some Recent Experiments.

Do you remember the first few times you ever ran a plow? Wasn't it a walking plow, and wasn't the ground just a trifle dry? Weren't you stumbling along, your head just a little above the handles, when suddenly they flew up and hit you under the chin? If you never had those experiences you never worked in hard-pan soil.

There are many kinds of hard-pan, almost as many as there are equations in chemistry. And most of them agree in one respect: their principal mission in life is to make life a burden for farmers. If they are plowed too wet they turn over in a slick furrow slice that, upon drying, would awaken the admiration of a brick-plant man. If they get dry and hard they can't be plowed at all. The days in which they are "just right" are few and far between. When the rains descend hard-pan depressions will hold water like a tub. When the drought comes the ground turns white and cracks open and the corn curls up promptly—very promptly.

Southeastern Kansas contains a lot of hard-pan soil—much more than is needed for brick. The farmers of that region have become tired of humoring this soil. They didn't know what to do until they remembered seeing the long tubes of nitroglycerine used to "shoot" oil wells. Then it occurred to them to use dynamite.

Hard-pan usually is a subsoil stratum of from six to eighteen inches thick, though in many places it is much thicker. The idea is to shatter this hard-pan and then plant the ground to some deep-rooted crops to keep it broken up.

The dynamite is placed in the hard-pan in a hole that has been bored with a post-hole augur. When several charges have been placed they are connected with an electric battery and exploded simultaneously. The soil is shattered and broken for many feet away from the holes. If they have been properly placed all of the hard-pan will be shattered. The cost of this work is about \$15 to \$25 an acre, though it will vary with the depth and thickness of the hard-pan. The ground should be planted at once to the clover or alfalfa or other deep-rooted crop in order that the roots may go down through the hard-pan and keep it broken up. If this is not done the soil will run together as before.

The agronomy department of the Kansas State Agricultural College is conducting some cooperative experiments with the farmers in dynamiting hard-pan. The department members are accumulating some interesting data in regard to this new departure in farm management.

It is thought that the proper use of dynamite, with farm manures, coupled with an efficient crop rotation, will solve the problem of cultivating hard-pan.

Better Be Busy, Kansas.

From *The Osborne County Farmer*.

The farmers of Osborne county talk about one hundred bushels of corn to the acre as a monster yield. It is very seldom reached in this county, even on a single-acre patch. What do you think is the world's record yield for an acre of corn? It is 254 bushels and 49 pounds. The corn was grown—not by a Kansas man or a farmer of any northern state—but by William Drake, in South Carolina. The next big corn show is to be held in South Carolina.

THE CUP AND THE PICTURE.

If Earl Willis Wins the Painting This Year It Will Be His.

The silver loving cup, offered as the sweepstakes prize in the state corn contest, stands as a memorial in the campaign for better corn in Kansas. It is offered as a prize in addition to the regular premium of that

class for the best ten ears of corn grown by a boy anywhere in the state. The winner's name is engraved on the cup every year, and thus the boy that wins the cup will have his name placed with the successful contestants of the past. The cup is kept on exhibition in the library of the Kansas State Agricultural College where the students, and thousands of visitors, may see and admire it. It is an honor for a boy to produce the ten best ears that will make it possible for his name to be engraved on the cup. And it is an honor for which hundreds of Kansas boys work every year.

The cup was given by the Kansas Corn Breeders' Association. The cup is of silver and is valued at \$100.

The Montgomery painting offered, in addition to the regular prize, for the best individual ear of corn, has an interesting history. Several years ago Albert Montgomery, the Chicago agricultural painter, lectured at the agricultural college in the state farmers' institute week. He became deeply interested in the boys' corn contest. Later he painted the picture and gave it to the Corn Breeders' Association. It is awarded every year, and the boy who wins it may keep it until the next contest. If any boy wins the painting for three consecutive years it shall become his property. Earl Willis, who lives on a farm near Manhattan, has won the painting the last two years. If he wins it this year it becomes his property.

IMPROVING THE SHINING HOURS.

How the Bumblebee Helps the Alfalfa Grower—One Man's Shipment.

Did you ever see the bumblebees flying and darting about in an alfalfa field that is in bloom? Do you know what they are doing? Gathering honey for themselves? Well, yes, but they also are making money for the farmer. For, be it understood, in the economy of affairs on the alfalfa farms of the west the happy and carefree bumblebee has an important part.

Yes; this is the friend of your youth, the bumblebee. The modern alfalfa farmer destroys a bumblebee's nest only when absolutely necessary. The bumblebee and the honey-bee are the principal insects of the west that have the ability to pollinate alfalfa or clover. An insect that can pollinate alfalfa is worth money, this year, with alfalfa seed at \$8 a bushel.

To illustrate: Billy Grumbin, of McCracken, Kansas, loaded 900 bushels of wheat into a car recently. That wheat sold for \$720. On top of this he put 146 bushels of alfalfa seed, sacked, for which he received \$1,168. The alfalfa seed was less than one-sixth the bulk of the wheat.

And this \$1,168 was received through the help of the bumblebee and the honey-bee, for not a very large number of the flowers would have been pollinated without their help.

A STORY FROM NEW MEXICO.

The Wonderful Discovery in a Cave Described by an Illinois Visitor.

Fred L. Charles, of Urbana, Illinois, professor of agricultural education, told a story in Manhattan, a few days ago, that was entertaining without inquiring as to the kind of smoking material used by the person that handed the alleged facts to the professor. Mr. Charles had just come up from New Mexico. While in the territory he heard of a cave recently discovered in a mountain, a cave nearly a mile deep or wide or back, that for centuries, perhaps, had been the home of so many bats that even the story-teller would not venture to estimate the number. The—shall it be called—guano of these bats was found to be about 20 feet deep throughout the cave. Some one, probably from Connecticut or Kansas City, bought the cave for \$500, ostensibly as a natural wonder, and now has formed a syndicate with one million dollars capital and is selling the fertilizer in bags at fancy prices. It is said that wherever this fertilizer is applied vegetation grows so quickly that it makes a noise like wind in telephone wires.

Art is the expression of a man's joy in his work.—*Fra Elbertus*.

IT'S MOISTURE, NOT SOIL.

THE STATE FORESTER'S RECIPE FOR SUCCESSFUL TREE GROWING.

In the Western Part of the State, C. A. Scott Says, Ground Preparation Is Especially Essential—Almost Any Soil Will Do.

In making your plans for planting trees next spring have you given any thought to the preparation of the ground? Full consideration of this question is especially needful in the western part of the state where the rainfall is uncertain. Trees of some kind can be found that will grow in almost any kind of soil, says C. A. Scott, state forester at the Kansas State Agricultural College, if there is sufficient moisture, but the moisture is very essential. The former magnificent white pine forests of the Lake States grew in very poor, sandy soil, so poor that there are hundreds of thousands of acres of sandy waste lands where once the pine grew. In the yellow pine forests of the South the soil is nearly pure white sand. In the Rocky Mountains the western pines grow in a very poor gravel soil, and in many instances trees are found growing between the rocks with practically no soil to nourish them. These illustrations are sufficient to prove that the soil is not the prime factor in successful tree growth. Moisture is the requisite, so before setting out any number of trees be sure you have, and can maintain, a sufficient amount of soil moisture to sustain the tree.

Here is the recipe: Plant trees only in ground that has been under cultivation for at least two or three years and is in a thorough state of cultivation. In the western part of the state the ground should be summer fallowed the year before the trees are to be planted. Summer fallowed does not mean merely to plow the ground and let it lie idle all summer. It means that the ground must be plowed deeply and worked sufficiently to keep down all weeds and that a soil mulch be maintained throughout the season. Under this treatment the ground retains in the subsoil the greater part of the rainfall of the year. With this stored-up moisture, in addition to the current rainfall, trees can have a good, vigorous start.

This is a big item in tree growth, but it is not the whole thing. Under the conditions adverse to tree growth found in the prairie regions it is absolutely necessary that intensive cultivation be given the trees. Weeds must not be allowed to occupy the ground, for they soon exhaust the moisture. They will come up and grow vigorously among the trees because of the extra amount of moisture obtained by summer fallowing. Good cultivation must be continued and a soil mulch maintained to prevent the escape of this extra amount of soil moisture. If the ground is in a good state of cultivation it will be in the best of shape to receive and hold all rain and snow that falls. Furthermore, trees respond to good care just as readily as any plant that grows.

The foregoing is more than theory, for in every county in western Kansas are found small groups of trees that are making exceptionally fine growth. An investigation of every instance revealed the fact that the trees had been carefully planted and cultivated. Some of them had been irrigated, others had not. Proper preparation of the ground before planting and cultivation after planting takes the place of irrigation.

A Casting of 4,200 Pounds.

The foundry has cast as many pounds of material this term as it usually casts in the entire year. It is averaging about \$75 worth of work a week. The record run, since the opening of this department, was made this term when 4,200 pounds of casting were made at one time. Much of this work is done by students. This is another example of the practicable work done at the Kansas State Agricultural College.

DON'T FORGET

THE

Farmers' Meetings

Annual Short Course

Boys' corn contests for a week. Five thousand boys took part in the corn contests last year. Several hundred attended the December meeting at the College. More than a hundred girls and women were in the domestic science week's course—a week of bread baking, of cooking and sewing, of sensible talks on household questions.

Something Unusual

and exceptionally good is being arranged. Every farmer who attends the December Institute gathering at the State Agricultural College gets more than his money's worth, and all it costs is your expenses.

Corn Talks

Corn Judging

Watch the papers for the announcement of the program.

A HORSE'S WINTER FEED

HERE'S AN ECONOMICAL RATION FOR THE FARM'S WORK STOCK.

Shredded Corn Stalks, Oat Straw, Hay, Carrots, Oats, Ear Corn, and a Feed Mixture—All Excellent Products That Have the Proper Effect.

How to feed the work horse in the winter; this is one of the most important problems confronting the farmer. Oats and timothy hay, the regular feed, is rather expensive in the winter, when the horses are idle much of the time. Ordinary barnyard straw and corn stalks are bad, in that they do not leave the horse in good condition for the sudden change to hard work in the spring. In the place of either of these feeds a variety of cheap substitutes should be used. The farmer should not neglect to grow and store for the winter feed a supply of corn fodder, oat straw, mixed hay and roots, etc. They help to give a variety in the winter feed.

Here is a winter ration for work horses that has proved satisfactory. It consists of shredded corn stalks, oat straw, hay, carrots, oats, ear corn, and a feed mixture of dried beet pulp, bran and oil cake in the proportion of:

Dried beet pulp.....4 lbs.
Bran.....1 lb.
Oil cake.....1 lb.

The ration was feed every day in this way:

MORNING FEED:
Oat straw.....5 lbs.
Carrots.....4 lbs.
Ear corn.....3 lbs.

NOON FEED:
Timothy hay.....4 lbs.
Oats.....2 lbs.

NIGHT FEED:
Shredded corn stalks.....8 lbs.
Carrots.....4 lbs.
Feed mixture.....2 lbs.

Examination Periods Changed.

The faculty has made a change in the examination periods. Instead of giving two successive periods to one examination, the examination will be given in the regular hour both days. The instructor must give one exam-

ination to those not exempted, but the second examination is left to his option. All examinations will be over at the end of the third hour the last day.

Troubles Ahead.

When the daughter of the house returns from college she is sometimes inclined to forget that there are serious duties awaiting her. It is then, says an exchange, that the wise mother brings her to a different point of view.

The girl had been very clever in her studies and had been at home only a few days when she said to her mother: "Yes, I've graduated, but I don't want to lose my interest in my work, and I shall try to keep up my psychology, philology, bibli—"

"Just wait a minute," said her mother. "I have arranged a course for you in roastology, darnology, patchology, and general domesticology. You might as well begin right now. Get your apron on and pluck that chicken."

More Studies About Food.

The copy for Part II of Mrs. Van Zile's bulletin, "The Study of Food," has been sent to the state printer. This bulletin is a continuation of one put out early this fall on the same subject. Both are intended for use in the correspondence courses recently put into operation by the Kansas State Agricultural College.

A Pen for Mr. Strickrott.

The class in job presswork II presented a fountain pen to L. B. Strickrott as a token of esteem. Mr. Strickrott resigned his position here to take up similar work in the government printing-office in Washington, D. C.

Back from the Zuyder Zee.

S. R. Stomps has returned to college from Amsterdam, Holland, where he has been visiting his parents during the past three months. His friend, L. C. Hondius, returned with him and will enter college next term.

THE KANSAS INDUSTRIALIST

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Number 14

WHY HOGS ARE DYING.

A BIG ITEM FOR TALK WHEN THE AGRICULTURAL BOARD MEETS.

Other Very Interesting Topics are to be Discussed Beginning January 11—No Date Set for Adjournment—Something About Sheep, Also.

When the state board of agriculture meets next Wednesday, January 11, in Topeka, it will be to discuss several topics of more than ordinary interest. The first of these in point of present-day importance will be "The Present Status and Future Outlook of the Serum Treatment for Preventing Hog-Cholera," by Dr. F. S. Schoenleber, of the agricultural college. Science has found a way to prevent cholera in hogs, but it cannot produce a serum that will stop the disease after the hog gets it. The important thing, then, is to get the serum to the hog before the cholera reaches it.

No one knows how long the board and its guests will stay in session. The announcement declares adjournment will not be taken until business is finished. With this liberty in view, the following program, containing the names of several distinguished men, will be read with interest, especially, as it seems that everyone will have a chance to say his say without danger of being called to time. Here's the program:

WEDNESDAY, JANUARY 11, 1911.

AFTERNOON SESSION.—4 O'CLOCK.

Roll-call.
Appointment of Committees.
Reading of Minutes of Preceding Meeting.
Report of Committee on Credentials.
The topics announced herewith will be considered, as near as may be, in the order given. Papers will be subject to pertinent discussion, and delegates are urged to prepare for these discussions. Others present, either men or women, of whom there are likely to be a large number, will also, as always, have the privilege of participating in the discussions, and are cordially invited to do so.

EVENING SESSION.—7:30 O'CLOCK.

Address of Welcome.....Gov. W. R. Stubbs
Address of Welcome on Behalf of the City and County.....E. R. Simon, County Attorney
Response.....Chas. E. Sutton, President
The Present Status and Future Outlook of the Serum Treatment for Prevention of Hog-Cholera.....F. S. Schoenleber, V. S. State Agricultural College, Manhattan.

Beef Production.....B. O. Cowan
Assistant Secretary American Shorthorn Breeders' Association, Chicago.

THURSDAY, JANUARY 12.

MORNING SESSION.—9:30 O'CLOCK.

Water Storage Possibilities.....L. L. Dyche
State Fish and Game Warden, Pratt.
Sorghum Culture.....Carleton R. Ball
U. S. Department of Agriculture, Washington, D. C.

AFTERNOON SESSION.—1:30 O'CLOCK.

Does it Pay to Interchange or Import Seed Wheat.....W. M. Jardine
State Agricultural College, Manhattan.
When the Cows Come Home, Frank D. Tomson
The Breeders' Gazette, Cedar Rapids, Iowa.
Kansas a Sheep State? Why Not?.....M. V. Carroll
The Missouri Ruralist, Sedalia.

EVENING SESSION.—7:30 O'CLOCK.

The Conservation of the Country Church.....The Rev. Duncan C. Milner, Chicago
Efficiency the Key Note in the Education of Our Girls.....Mrs. Mary Pierce VanZile
State Agricultural College, Manhattan.

FRIDAY, JANUARY 13.

MORNING SESSION.—9:30 O'CLOCK.

What of the Morrow?.....E. M. Wentworth
State Center, Iowa.
The Story of My Farmer Boys.....Will B. Otwell
Otwell's Farmer Boy, Carlinville, Ill.

AFTERNOON SESSION.—1:30 O'CLOCK.

Election of Officers and Members.
Maintenance of Soil Fertility, Charles E. Thorne
Director Ohio Agricultural Experiment Station, Wooster.

Query Box.
Installation of the New Board.

EVENING SESSION.—7:30 O'CLOCK.

While She Waits.....Miss Edna D. Day
Department of Home Economics, State University, Lawrence.
The Growing of a Human Plant.....The Rev. Frank L. Loveland, Topeka.

Since THE KANSAS INDUSTRIALIST drew attention, three weeks ago, to the fact that the state has more dogs than sheep, every other orator in Kansas has been talking sheep. No one has said a word for the dog. M. V. Carroll, of the *Missouri Ruralist*, Sedalia, Missouri, is to inquire, in the forthcoming meeting, why Kansas has so few sheep.

REMEMBERED HER COLLEGE.

Margaretha Horn, Who died in November, Wills Three Paintings to K. S. A. C.

Information has been received by Henry J. Waters, president of the Kansas State Agricultural College, of the death in Detroit, Michigan, of Miss Margaretha Elise C. Horn, a graduate of the college in the class of '93. C. Leidich, attorney at law, has notified President Waters that Miss Horn bequeathed to the college three paintings, one by Hopkins and two by Paulus. The Hopkins painting is known as "Cylen Castle, Pentland Firth." The Paulus pictures are "Ruay Wert" and "Still and Silent Waters." The will provides that these paintings are to be hung in Fair-

HORSES OR MOTOR-CARS

A FEW FIGURES THAT WILL GIVE YOU DEEP THOUGHT.

Thirty-One Million Horses, Worth Three Billion Five Hundred Million Dollars, Represents the United States' Interest—Only a Few Thousand Automobiles.

How many horses do you suppose there are in the United States to-day? Thirty-one millions! How much are they worth? Three billion five hundred million dollars! More money than all the New Year's editions expected to see spent for buildings this year in the whole country. More money than Rockefeller and Carnegie and Morgan and James J. Hill have

Kansas will pay the federal government, this year, for the army and navy, enough money to support the Kansas State Agricultural College for sixteen years—about 8 million dollars. But the common people don't complain much about the army and navy.

child Hall, the college library. After Miss Horn was graduated from the college she became a teacher of botany in the Western High School of Detroit. She died in November.

ANOTHER GOOD MAN RESIGNS.

George K. Link, Assistant in Botany, Goes to the Nebraska Station.

Geo. K. Link, assistant in botany, has been appointed adjunct professor of agricultural botany, under E. Mead Wilcox, professor of agricultural botany in the Nebraska experiment station and the college of agriculture of the University of Nebraska. Mr. Link took his new position January 1. He proved himself an exceedingly valuable man in the Kansas State Agricultural College. The department parted with him most unwillingly. A considerable increase in salary, as well as an unusual promotion in rank, combined to make an offer that Mr. Link could not afford to disregard. He is a graduate of the Chicago University and a member of the Phi Beta Kappa society.

STOCK MEETINGS IN TOPEKA.

Several Associations Will Confer Next Week in the Capital.

The Kansas Improved-Stock Breeders' Association will hold its regular annual meeting at Topeka, Monday, Tuesday, and Wednesday, January 9, 10, and 11.

The Kansas Swine Breeders' Association and the Red Polled Cattle Club will hold their meetings in connection with the Improved-Stock Breeders' Association.

I. D. Graham, of Topeka, secretary of the Improved-Stock Breeders' Association, will furnish programs for its meeting, as well as information about other stockmen's meetings.

The State Veterinary Medical Association will hold its meeting January 10 and 11. Dr. Burton R. Rogers, Manhattan, is the secretary.

Bread and Buttonholes.

A girl only 16 years old, Minnie Johnson, living on a farm near Manhattan, won the first prize, \$5, in the bread-baking contest at the Kansas State Agricultural College last week. The second prize was won by Mildred Pollock, of Burlington. Nora Hott, of Hiawatha, won third prize. Eighteen counties were represented in the contest.

Luella Duncan, a Hiawatha girl 18 years old won the prize of \$3 offered for the best and neatest buttonhole sewed by any girl between the years of 14 and 21. Mabel Leger, of Russell, won second place, and Flossie Elliot, of Delphos, a girl of 17, won the third prize.

MOTOR-CARS HELD THEM.

Farmers Crowded Engineering Building During the Institute.

The place occupied by the motor-car in the hearts of the farmers was very clearly shown in this year's state institute meeting at the Kansas State Agricultural College. The manure spreader, cultivators, mowers and other farm machinery exhibits usually attracted mildly interested groups of ten or fifteen farmers at a time. But it was almost impossible to get near the six-cylinder motor-car exhibited in one of the rooms of the mechanical engineering building. Indeed, it was at times impossible to get into the room. Every farmer present, evidently, was eager to learn everything pertaining to motor-cars. Motor caps, motor gloves and motor coats were very noticeable features of the institute this year. Many farmers came to the meeting in their own cars from farms at a distance.

SOME DRY SPOTS OUT THERE.

J. W. Longstreth, of Lakin, Came in to Talk of Irrigation Work.

J. W. Longstreth, of Lakin, Kansas, is employed by the United States Department of Agriculture, office of experiment stations, in conducting irrigation investigations. Mr. Longstreth's work is confined chiefly to the western fourth of Kansas, in what may be called the semi-arid regions, and in those regions where the rainfall is 20 inches or less a year. His purpose this year in attending the state institute meeting of farmers at the Kansas State Agricultural College was to confer with Henry Jackson Waters, president of the college, with respect to cooperation between the college and the United States government in its irrigation projects in western Kansas.

THE WEALTH IN ALFALFA.

Addison Millyard, of Lakin, Had 500 Bushels of Seed From 150 Acres.

J. W. Longstreth, of Lakin, who was at the Kansas State Agricultural College during the state institute, told a story that showed conclusively how the right kind of farming pays. It referred to the experience of Addison Millyard, of Lakin. Mr. Millyard grew 500 bushels of alfalfa seed this year on 150 acres. This seed he sold for \$8 a bushel, or more; much of it for more. In addition to this seed, he had the hay on a good pasture after cutting it. Mr. Millyard had been up

IN THE SHORT COURSE.

TEN WEEKS' INSTRUCTIONS FOR FARMERS WHO HAVE LITTLE TIME.

Nothing More Important in the Year's Work Than the "Get Wise Quick" System Arranged for Busy Men—Figures Later.

A large number of students in the winter short course for farmers have received their assignments and have settled down to college work. The short courses are offered to the farmers of the state who believe they cannot afford, either from lack of money or time, to take the long course. The classes last year numbered 239 students in the agricultural short courses. The enrolment for this year probably will exceed that of last year.

The agricultural college offers three farmers' short courses. The course in general agriculture and the course in dairy farming cover two winter terms of ten weeks each. The course in dairy manufactures covers one winter term of ten weeks.

The course in general agriculture is the one taken by most of the students. The work offered gives a knowledge of the fundamental problems of farm life. In the first term in this course the student is taught the principles that have to do with producing the staple farm crops and the way grain should be judged. The handling and feeding of cattle, horses, hogs and sheep is taken up and a careful study made of the basic principles of live-stock production.

Fruit judging and poultry management are carefully studied. Practice in handling tools and machinery is given in the farm mechanics laboratory and in the woodwork shop.

The second term is devoted to a careful study of live-stock problems, crop production, crop and stock judging, and farm management. The shop work for this term is blacksmithing.

The course in dairy farming is a consideration of the problems that confront the dairy farmer. The course in dairy manufactures is for creamery work and related subjects. In addition to all this nearly 150 girls are taking a short course in home economics. Many of the short-course students become so interested in college work that they return and take the long course. The living expenses of the course need not exceed \$75. Many of the short-course men spend less than this.

FIVE TO TALK OF DRINK.

That is to Say That Many Will Try for the Annual Talkfest.

Five orations upon the subject prohibition have been received by James W. Searson, associate professor of English, from the Kansas Wesleyan University. He will grade them for thought and composition. The orations are to be delivered at the local oratorical contest of the Kansas Wesleyan University, when orators will be selected for the state oratorical contest. Prof. Searson has been asked to act as judge on delivery at the state contest, but on account of other engagements he does not expect to accept.

THE BUSY MAROLF FAMILY.

Showing How Society at Happy Ridge Moves Along These Days.

From The Wathena Republican.

Ed. Marolf, of Gracemont, Oklahoma, is visiting his parents, Mr. and Mrs. Christ Marolf, this week.

Mrs. William Redmond took dinner Monday with her niece, Miss Lizzie Marolf.

Fred Marolf is building a corn-crib for Louis Marolf, this week.

C. A. Marolf butchered a beef Tuesday.

Mr. Dempsey and sons finished plastering for Christ Marolf last week.

Kansas, with approximately 1½ million population, has one agricultural college.

Denmark, with 2 million population, has twenty-nine agricultural colleges.

Think it over, Mr. Lawmaker.

lot isn't worth \$275,000. Motor-car manufacturers have a few earnest thoughts to think before they wholly displace horses in this country. And the mules are still to be considered.

The Gilmans Win Often.

J. M. Gilman and his son Paul, of Leavenworth, took six prizes in the corn show at the Kansas State Agricultural College this year—two firsts, one second, two thirds, and one fourth prize. Paul Gilman, who won second prize in the boys' corn contest, is 17 years old. Already he has won several prizes.

Use the Schools.

The Kansas City Star.

Kansas will find the solution to many of its important problems when it finds the way to a broader use of its state schools.

The Fame Of McKeever.

W. A. McKeever, professor of philosophy, receives many unusual letters. A man in the Montana state penitentiary has written asking him to aid him in getting a retrial of his case. He was convicted of murder. To pay the expenses he wishes to sell neck rings, bridles and buggy whips made of horse hair and covered with silk. He asks the professor to help him sell his wares. Not long ago Professor McKeever received an envelope from Tientsin, China. It was unsealed and empty. Perhaps the sender decided that the professor could not understand Chinese, anyway.

THE KANSAS INDUSTRIALIST

Issued weekly during the college year by the Kansas State Agricultural College, Manhattan, Kansas.

PRES. H. J. WATERS.....Editor-in-chief
PROF. C. J. DILLON.....Managing Editor
DR. J. D. WALTERS.....Local Editor

Except for contributions from officers of the college or members of the faculty, the articles in THE KANSAS INDUSTRIALIST are written by students in the department of industrial journalism, under the direction of Prof. Charles Dillon.

The typesetting and other mechanical work is by students in the school of printing, of which J. D. Rickman is superintendent. Both these departments are in Kedzie Hall.

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VOCATIONAL ENGLISH.

This is the day of the trade school, of the manual training high school, of the college of agriculture and the mechanic arts. Nowadays, subjects and courses are called "technical," "scientific," or "cultural," according as they train the brain to think and the hand to execute, or as they lay the foundation for that training, or as they serve to broaden the mind and polish the product of the other subjects and courses. The tendency at present is to emphasize the so-called "vocational" subjects. For most students, the tendency is in the right direction. English is as regularly labeled "cultural" as manual training is labeled "vocational."

The assumption is that a course in woodwork or blacksmithing, or cooking or sewing, fits one to do, while a course in English fits one to be, perhaps, in a somewhat higher sense of the word. While it is believed that English is cultural in the foregoing sense, it is nevertheless contended that there is no subject so universally vocational. Blacksmithing and woodwork are vocational for the boy; cooking and sewing are vocational for the girl; but English is vocational for both. No matter what a person's vocation may be, a means must be found to express ideas. That means is important to all—to the farmer, the stock breeder, the mechanical engineer, the electrician, the dressmaker, the instructor in any of these subjects—equally with those who are in what have long been called "the professions."

The lawyers, the preachers and the teachers have no monopoly of good English. If they ever had, it was because those not in the profession chose to give them that monopoly by surrendering their birthright, the command of the mother tongue. New professions are born every year; rather, they are evolving out of the trades and the mere "callings," and it is of no mean significance that as the trade approaches the dignity of a profession the necessity increases for a command of English. It is not too much to say that a trade acquires the dignity of a profession only so fast as its members acquire the ability to express their ideas in clear, terse, and forceful English.

It is not many years since the mechanical engineer was regarded as having a trade rather than a profession. Within the last decade or so the country has witnessed the development of the professional wheat grower, the professional dairyman, and the professional stock breeder. It is not mere accident that along with this development of the trade into the profession there has come into existence a large amount of literature on these subjects, expressed, for the most part, in clear-cut, readable English.

You may say that the evolution of agriculture from a trade to a profession is due to the fact that agriculture has become scientific. And what, if you please, is science? It is "systematized knowledge;" but knowledge must find expression. Well, this expression is just what this screed is about.

A survey of history shows that the progress of the world in science and civilization has gone hand in hand with the development of flexible,

spoken and written language. The one may not be the cause of the other, but the one is absolutely essential to the other. A command of English is absolutely necessary to him who would make of his trade a profession.

THE WAYS OF PUBLICITY.

Colleges everywhere are eager for publicity. The heads of institutions have realized in the beginning of this twentieth century that the people supporting educational institutions have a right to know what they are doing and just how the employees of the state in those institutions are serving the people. The last thing the colleges seem inclined to learn is the uselessness, the waste of time and money, in issuing the news of the college in book form for circulation in newspaper offices—and publicity, in the last analysis, must come from that source. Some of these books are creditable as examples of the printer's work. The contents of some are readable, and almost all are valuable. Some, however, fall so far short of the mark that they neglect to display the name of the college, or even the point of origin, in type upon the cover. One especially beautiful book, more presentable than many high-class magazines, has nothing on or in or around it to give a clue to the identity of the distributors unless one has time to read the text carefully and decide by reason of occasional mention of the college.

Very few editors whose help the colleges seek open mail that suggests pamphlets or advertising. One reason is that the editor is trained to frown upon such advertising. He believes the only kind that pays is in his own columns. If he should, in absentmindedness, take the book from its envelope it is what race-track frequenters would call a "long shot" that he won't read it. No one ever sees anything quoted in the metropolitan press from these stiff-backed publications. They fall into the nearest waste-basket if the experience of twenty years is worth anything.

The wisdom of sending out "press bulletins," regularly, either in sheets or slips, is open to grave suspicion also. There is a degree of psychology in this. And, by the way, psychology is an excellent thing upon which to hang any theory. Hand an editor, big or little, a "piece" with leave to print and nine times in eight he'll dump it into the heap along with the pamphlet. He'll show you whether he has to run that stuff. He doesn't see the importance of the announcement that Prof. Forehead is about to test the relative strength of concrete as compared with Bermuda onions. Not for him, if you please.

But send Mr. Editor a newspaper carrying headlines that tell him at a glance whether he should print a story, headlines that carry an active verb in the top line, when possible, indicating something in which humanity is interested—and see how keen he is to give it space. And he is particularly happy if he doesn't have to give credit for the piece.

These are ordinary, sixteen-hour days, right now. Editors have no time to dig for their facts in a mass of verbiage. Give it to them right off the bat and don't fear to lose dignity in the interest of knowledge. What the world desires—wants—is clean-cut facts about the mighty problems of the soil and the home. Give them to the world in language from the hills and in readable form.

THE DAY OF FARM ENGINES.

Two big features stood out as premier attractions in the recent farmers' state institute at the Kansas State Agricultural College: the conference on rural churches and schools, and the engine display in Dean McCormick's department. Three hundred generous newspapers throughout the state prepared Mr. Farmer for what he was to see, and when he arrived he saw it. He was mightily interested, too, in every engine and every bit of improved machinery—and especially motor-cars. He may not have scrambled over his fellows or jostled anyone roughly aside in his eagerness to buy a washing machine or a churn—so little use for these, in the fields,

A Golden Text.

He disappointeth the crafty, so that their hands cannot perform their enterprise.—Job 5:12.

you know—but you just have to agree that Mr. Farmer pushed forward to see the six-cylinder touring cars and the riding cultivators and the traction-engines that pulled goodness knows how many plows over an incredible expanse in an amazingly brief time. Yes, sir; Mr. Farmer was there with a smile for the time-saving and labor-saving machinery—for the fields.

The manufacturers never did a wiser thing than when they marched out to Manhattan with their goods and set them up where prospective customers could see them in operation. This is the age of engines on the farms. Farmers, like brokers or railroad men, must take advantage of time if they are to succeed in the new program of agriculture. They can no longer afford to lag in the rear. Every heaven-sent drop of rain must be conserved for the fullest benefit of the thirsty soil, and the best way to conserve it is to work quick, at the right time. Engines pulling eight or a dozen plows are the answers to the puzzles.

But in quite another way engines are to have an important part in the farming of the future. One 4- or 6-horsepower gasoline engine will do all the heavy work of a farm. It can be equipped to do several tasks at the same time. It can be made to pump and saw and churn, and wash the clothes while father lies on the flat of his back and smokes in the shade of the old apple tree and mother is reading THE KANSAS INDUSTRIALIST or some other high-class periodical. And afterward the same engine can be put upon a wagon and made to provide power for the sprayer. All of which is respectfully referred to those that will arrange next year's institute program.

THE FORT HAYS STATION.

It wouldn't take long for a legislator to realize the importance of the Fort Hays, or Western Kansas experiment station if he spent a day there. The Hays station was established particularly to serve the interests of the state; to work out the agricultural problems peculiar to this region; to develop varieties of grain and forage crops adapted to the climatic conditions there prevailing; and to work out systems of farming that will be more remunerative and support a larger population.

The western portion of the state has a soil of great fertility, a climate capable of developing a rugged and virile race of people. The problem is to learn how to get sufficient and uniform yields with a limited water supply.

The board of regents of the Kansas State Agricultural College has asked the legislature to appropriate for the Hays station \$30,000 for 1911-'12 and \$30,000 for 1912-'13. If you doubt the wisdom of this work, Mr. Lawmaker, take a trip out to Hays some night and visit the big farm. Talk to the farmers of western Kansas. You'll be convinced.

A HELP IN ENGLISH.

The greatest possible help in English that any instructor can give is to insist upon correct speaking and correct writing in his department. Obviously it would be difficult for some of the faculty—in the department of chemistry, where several hundred students assemble, for instance—to draw the attention of every student to the fact that he has just doubled his negatives or split an infinitive or used "done" for "did" or "has went" for "has gone." To do this might seriously block business. But every instructor can, and should, mark every error in composition in the class papers, and whenever possible draw a student's attention to unpardonable looseness in speech. Such action would be a kindness to the student and give invaluable aid to conscientious teachers of English who are doing their best to rub out the rough spots in the prairie English of two thousand boys and girls.

And this is exactly what Dean Brink

has asked every instructor to do. The request, which should be received as it was intended, for the best interests of the college as well as of the students, was preferred in a letter issued Wednesday from the English department.

The first lecture to students in the department of industrial journalism, last September, conveyed notice to twenty young men that ungrammatical speech would not be tolerated in that course. Every student who violated that rule heard about it immediately. This has not resulted, as it was feared it might, either in restricting the liberty of speech or in making it pedantic or cumbersome. The students knew their English. They had been properly instructed; but some had become careless. This was not true of the wealthy man in Kansas City who said, speaking of a party he had neglected to attend, "If I'd knowed I coulda rode I woulda went." That man had had no schooling. The students of the Kansas State Agricultural College have the golden chance. Dean Brink desires them to take advantage of it.

"—UNTIL THROUGH."

One of the praiseworthy features of the forthcoming session of the state board of agriculture—to meet in Topeka January 11—is the announcement, upon the front page of the program, that the board will meet at 4 o'clock Wednesday afternoon "and continue until the business requiring attention is disposed of."

There's a system for you that's worth while emulating. The customary practice is to announce a three-days' meeting, use two-thirds the time listening to a lot of talk that no one cares to hear and cut out the really important business the secretary or president had in mind, when the hour of adjournment came.

That isn't the Coburn system—not in this high-pressure age. The secretary of the state board of agriculture doesn't intend to have anyone ring the bell when he's only partly through the dessert, or it may be, has just reached the entrees. Secretary Coburn knows a few things about Kansas and farming and live stock, and the chances are he may tell a story or two, although he is not on the program.

But aside from all this, the idea of a board meeting and staying met until it does the things for which it was called together, is a hopeful thing, and thoroughly Coburnesque.

ALL FOR THE FARMER.

The institute is the farmers' meeting. It does not belong to the officers or the speakers, says *The Farmers' Review*. Neither is it held for town people. It is originally and distinctively an institution for the man on the farm and his family. Where properly managed it is of practical value as a source of reliable and helpful information. But we cannot expect to derive benefit from the institute unless we attend and take an active interest in it. It is up to the individual to get the best out of these meetings, not only by attending but by asking questions. Do not wait for some one else to ask for what you want to know. If you do you are likely to go home without the information. We get very little out of this world that we do not go after. It is mostly a case of traveling to the mountain. Do not blame the institute if you do not get something out of it this winter. The fault will not be that of the institute. It will be found closer home.

WHY AN EXPERIMENT STATION?

One of the largest services to the state by the college is through the researches of the experiment station. These cover every phase of agriculture, and include soil management, crop production, origination and development of new and improved strains of staple crops, the development of crops especially adapted to the western portion of the state, the breeding, feeding and managing of live stock, the control of animal and plant diseases, the suppression of the ravages of insect pests, fruit growing, dairy husbandry, and poultry husbandry.

For this purpose is asked \$20,000 in 1911-'12 and \$25,000 in 1912-'13. You can't learn without experiments.

Modern Farming.

A farmer's fossiliferous
Who thinks his cow's corniferous
Will ever be lactiferous
On bran or grass or hay.
Each barnyard covered over,
And a 'silo' made of clover.
With a fair per cent of 'stover,'
Is the only modern way.

In raising crops albuminous
One fact is fairly luminous—
The need of the 'leguminous'
Is something one should know.
Unless your plants endogenous
From atmosphere hydrogenous
Extract a bit 'nitrogenous'
You'll never make them grow.

Get 'absorbents' aromatic
And a 'float' or two 'phosphatic,'
And from out your mental attic
Have a care that you are rid
Of all former ways of mowing.
Planting, plowing, seeding, sowing:
Hay and corn's no longer growing
As your father thought it did.
Frank Hill Phillips in Puck.

SUNFLOWERS.

In Ellsworth the White House has just been painted red.

Will the P. O. P. in Kansas City offer Dr. Cook \$5,000 for his new lecture? We pause for a reply.

"The Tinware for Five" is the way the Junction City Union refers to the discharge of five Union Pacific employees.

A "black ladies' handbag" was lost in Manhattan one day last week, according to the "ad" that was printed about it.

"No one," the Topeka Capital wails, referring to the late Dr. Crippen, "knows the prevarications he had to endure for years." Sad, wasn't it?

"Manhattan's old weinstubes," described in a recent issue of *The Star*, had no reference to the justly celebrated town of that name in Kansas.

It's all right to be steady, but don't neglect a little ginger. The world doesn't pay much attention to slow pokes. Some people would lose time falling down a well.

The account in *The Kansas City Star* of the Richards fancy dress ball lacked only one thing: It omitted mention of Henry D. Ashley as a page, and Pat O'Hearn as keeper of the bastille.

"Have you any Red Cross seals?" inquired a customer in a Poyntz Avenue store the day before Christmas. "No," was the startling reply, "but we have 'Red Cross Cough Drops;' they're just as good."

The women of the First Congregational church in Salina voted, recently, not to wear their hats in church this month. "If everything goes smoothly" they will continue the schedule through February.

J. M. Nation, state auditor, says he intends to run for governor two years hence upon a platform favoring a law making it a crime to give a Christmas present costing more than 50 cents. He might pull through on that plank.

It was kind of *The Evening Review*, of Garnett, to say all those cheerful, helpful things about THE KANSAS INDUSTRIALIST. But don't write "marked copy" on the wrapper. Every good paper, like *The Review*, is read carefully in this office. Next!

The *Hutchinson News* brags that 383 homes were built in that city in 1910. Well, the Kansas State Agricultural College is educating 675 fine, handsome, healthy girls to be wives—the right kind of wives—in twice that many homes, Mr. Morgan. Better get under and boost.

It is hoped no one else thinks of this before THE KANSAS INDUSTRIALIST gets out: The papers were worrying, last October, because never again, for 100 years, would anyone write the date 10-10-'10. Did you notice, Sunday, that another rare chance had come? Write it 1-1-'11. And don't forget, next November, to say something about 11-11-'11.

Some philosopher, perhaps it was Carlisle, said it didn't pay to hit back—not always—and commenting upon this another writer in a current magazine added: Have you never noticed that the meanest, cheapest people in this world never are heard except when they say something to wound—usually against those that haven't harmed them? It's a whole lot better to "scatter seeds of kindness" and a few laughs as you go along.

LOCAL NOTES.

Laura Lee Setliff is back in college after a term's absence.

Lina Tulloss, of Ottawa, a K. S. A. C. student in '08, has taken out an assignment for the winter term.

Miss Daisy Zeininger, instructor in mathematics, and Miss Charlene Furey, assistant in English, spent the holidays at their homes in Wichita.

The cadet corps will not be enrolled for the winter term until Tuesday. Not all of the assignments have been completed. It will be Tuesday before Captain Boice can enroll all the cadets.

E. L. Holton, chairman of the faculty committee on accredited schools, is outlining a definite plan whereby the various high schools are to be accredited to the Kansas State Agricultural College.

J. Oliver Armstrong, a sophomore in the fall of '08, has returned to the college to finish his course in civil engineering. He has been engaged in railroad construction work for the last year.

The first student assembly of the winter term was held Wednesday morning. Just as many class yells, and just as strong as ever, livened things up. Dean Brink welcomed the students and urged them to make proper New Year resolutions and live up to them.

The meeting of the Y. W. C. A. next Thursday evening will be devoted to the Cascade conference. The girls that attended the conference last summer will tell their experience at the quiet retreat in the Rockies. Gladys Seaton will lead the meeting. The usual time and place—United Presbyterian Church at 6:45 o'clock.

The present and former members of the Y. W. C. A. delegation to the Cascade, Colorado, convention met recently at the home of James W. Searson, associate professor of English. A permanent organization was effected. Miss Flora Hull was elected president. It is believed that thirty delegates will attend the meeting at Cascade, Colorado, next summer.

ALUMNI NOTES.

C. S. Conner, '09, of Lyons, Kansas, was among the visitors here during institute week.

J. A. McKenzie, '01, a farmer and stock grower of Solomon, Kansas, reports the birth of a daughter Thanksgiving Day.

L. G. (Shorty) Haynes, '09, forest ranger on the Magdalena national forest, New Mexico, visited at the college Thursday enroute to Glasco, Kansas, to spend the holidays with his home folks.

Harvey Adams, '05, first lieutenant, Philippine constabulary, left last week for the Philippine Islands to resume duties. Lieutenant Adams spent four months visiting friends and relatives in Kansas.

F. W. Wilson, '05, and family left Monday, December 26, for Phoenix, Arizona, after a four-weeks' visit in Manhattan. Mr. Wilson is professor of animal husbandry in the University of Arizona.

Mark A. Carleton, '87, cerealist, bureau of plant industry, United States department of agriculture, spent two days at the college recently. He is investigating wheat conditions in western Kansas.

John F. Ross, '02, superintendent United States experimental farm, Amarillo, Texas, spent two days on the campus renewing acquaintances while on the way home in Jewell County for the holidays. This is Ross' first visit to the college since graduating.

Dr. F. L. Schneider, '02, veterinary inspector, bureau of animal industry, United States Department of Agriculture, with headquarters at Albuquerque, New Mexico, returned to his duties last week after spending two weeks visiting his parents in Manhattan.

A. E. and V. E. Oman, '00 and '09, respectively, spent a few hours in Manhattan between trains Friday morning

enroute to Walsburg to spend Christmas at home. A. E. Oman is forest assistant on the Weisner national forest, Idaho. V. E. Oman is an electrical engineer in the employment of the Santa Fé Railway Company with headquarters at Kansas City.

The annual business meeting of the K. S. A. C. Alumni Association, Washington Branch, was held at the home of C. P. Hartley, '92, December 21, 1910. The following officers were elected for the ensuing year: President, J. B. S. Norton, '96; first vice-president, Harry Umlinger, '05; second vice-president, C. L. Marlatt, '84; secretary, A. B. Gahan, '03; assistant secretary, Miss Julia R. Pearce, '90; treasurer, Lewis W. Call, '83. The annual reunion of alumni and others formerly connected with the Kansas State Agricultural College will be some time in January. The time and place have not been definitely settled. Seventy-five persons are eligible to attend this reunion. Forty are alumni and the remainder either ex-students, ex-members of the faculty, or the wives of those formerly connected with the college.

NO PINK EGGS FOR HIM.

Prof. Jardine Prefers His Poultry Products Uncolored, If You Please.

"A dozen eggs, please," said W. M. Jardine, professor of agronomy, to the man who sells butter, milk, cream, cheese, eggs, and sometimes ice-cream, in the Dairy building. "There you are," said the clerk, handing out the eggs and announcing the price in what sounded like Standard Oil figures. "And there you are," said the professor, as he pushed the amount across the counter. "Going higher, aren't they?"

In the Jardine kitchen the next morning there was consternation. The cook was alarmed. One of the eggs when broken open disclosed a "white" that wasn't white. It was pink, and nobody in the Jardine family desired to eat a pink egg. It was examined, and re-examined and cross-examined and much discussed. Finally it was decided to let the poultry experts pass upon it. So Prof. Jardine gathered together the dangerous looking egg and took it back to the dairy department and the poultrymen for an explanation. He mentioned cyanide and strychnine and also he wondered why any hen should "lay" for him in this manner.

But the poultrymen laughed, for they understood the pink egg. One of the experiment station eggs had found its way into the "for sale" basket. And that egg, they explained, came from the pen where the dye-feeding experiment is being carried on—where hens fed a certain dye will lay pink eggs. They also explained that the pink egg was harmless, but Prof. Jardine believed he'd take his eggs with white whites.

RECTANGULAR SILOS FAILED.

But Feed Has Been Preserved in Circular Ones for 7 Years.

A large audience attending the state institute for farmers listened to E. H. Webster, dean of agriculture at the Kansas State Agricultural College, speak one morning last week on silos and their purpose. Kansas farmers are showing an increasing interest in this subject. More than 400 silos were built in Kansas this year. Dean Webster said that if the product of ten or twenty acres were put in a silo, the yield to the farmer from these few acres would be greater than the yield from the remainder of the farm.

Silos were built in rectangular shape a few years ago in the Eastern states. This permitted air to pass down in the corner spaces, and caused the silage to spoil. A disbelief in silos thereupon became widespread, and this disbelief has been hard to remove. Nowadays, silos are made circular. They are more easily packed and the contents more easily removed. Concrete and staves have given the best results so far as building materials for silos in Kansas. In such structures silage has been kept in perfect feed condition for seven years. By taking off a layer from the top every day, a clean, fresh supply of feed can be kept and used both for dairy and beef cattle.

TO IMPROVE THE HORSES

REGISTRY BOARD'S REPORT SHOWS WHAT'S BEING DONE.

Grade Sires and Inferior Pure-Breds Have Given the State too Many Scrubs—The Laws, and the Breeds in Kansas.

Kansas has a whole lot to learn about horses. The industry, the rearing of them, has made some progress in the last few years, but it is far in the rear of agriculture. A live, active farmer will be mighty particular about the breeding of his corn, but he'll pay little or no attention to the pedigree of the father of his horses. The indiscriminate use of grade sires, unsound sires, and inferior pure-breds—carelessness, lack of appreciation of the value of purity in the breeding—are responsible for the poor horses that Kansas has to-day.

It was to awaken the interest of the people and improve Kansas horses that the legislature, in 1909, passed the stallion registration law. This law requires the registering of every stallion with the Kansas Live Stock Registry Board. This board consists of the dean of agriculture, the head of the veterinary department and the head of the animal husbandry department of the Kansas State Agricultural College. The owner of every stallion must have a certificate from the board testifying to the genuineness of the pedigree. This certificate and the enrolling of the horse's name cost \$2. Conviction for violation of this law means a fine of from \$10 to \$50. Also, every stallion must have a license, and this costs \$2. These precautions, common in most states, insure pure breeding.

LOOK OUT FOR FAKES.

And whatever you do, Mr. Farmer, beware the fake pedigree. The woods are full of them. There are so-called registration boards in this glorious land that'll sell you any old pedigree you may desire for your horse; and the chances are eight to ten that some of your poor, runted horses, that have as much style as a goat and not much more endurance, came from just that sort of a family. One-half the beautifully engraved pedigrees floating around this country are fakes.

The first annual report of the Kansas Live Stock Registry Board will be out soon. It is being set now in the School of Printing at the Kansas State Agricultural College—where some fine work is done, by the way. The average value of horses in Kansas, this report will say, was \$107 in January, 1910. With the present high prices of land, feed and labor, no one can afford to rear horses for \$107. Therefore, you must have better stock. Good horses, draft and light, never were in better demand, the registry board says, but the country is overrun with scrubs and grades. When a mare is unfit for work two-thirds the farmers turn it out "for breeding purposes" in the pasture. This policy, the board says, begets unsoundness. It is ruinous.

HERE'S THE KIND.

Canada gained wisdom long ago in this respect. That country began importing Clydesdales in 1842. Scotland knew ages ago. The farming communities of Europe are getting rid of their scrubs and buying pure-breds. The governments over there help the thing along, though. Belgium has been putting up about \$5,000 a year for its registration society and \$70,000 annually to encourage good breeding in horses. Also, it gives prizes for mares and their foals. Germany is just as generous and sensible.

As to Kansas, the board has approved 2,599 pedigrees. The records show the state has these stallions, or did have them in 1910:

Belgians.....	133	Percherons.....	1342
Cleveland Bay.....	15	Saddlebred.....	16
Clydesdale.....	41	Shetland.....	9
French Coach.....	35	Shire.....	114
French Draft.....	261	Standard.....	553
German Coach.....	38	Suffolk.....	1
Hackney.....	12	Thoroughbred.....	12
Moravian.....	17		

Seventy per cent of the pedigrees of pure-bred draft horses recorded, it will be noticed, were Percherons.

To escape criticism: Do nothing, say nothing, be nothing.—*Fra Elbertus.*

K. S. A. C. A WORLD LEADER.

A Fine Bit of Commendation for the Rural Boy Scout Work.

Kansas Agricultural College, Manhattan, is leading the world in getting all rural life boys in line, or will lead the world when the plans of E. L. Holton, professor of rural life, are uniformly adopted.

There are 160,000 rural life boys in Kansas, and Prof. Holton has set about organizing a Rural Life Boy Scouts company in every school district in the state. It acquaints the boys with the secrets of the prairies, the streams, and the forests, and teaches them to read nature as well as books. It encourages thrift, develops enterprise, and magnifies the good in life and in character.

It is a mighty work that Mr. Holton has undertaken, but he will make good because he has made good in every place he has been and in every work he has undertaken.

A year ago Mr. Holton had charge of a great city work with the boys of the street at the famous Five Points in New York, and the results were grand. They will be in Kansas.—*The Boston Journal of Education*, December 29.

Dr. A. E. Winship, editor of the *Journal of Education*, is one of the leading men in his department of journalism. His publication has a world-wide circulation.

AFTER-TURKEY MENU.

The Annual Review Finished—The People Return to Every-day Living.

The meals described—or prescribed—below ought to stave off starvation for another day at least. The KANSAS INDUSTRIALIST welcomes opinions of its readers as to how to improve the menus offered in its columns from time to time.

BREAKFAST		
Oranges		
Oatmeal with Sugar and Cream		
Sausage	Creamed Potatoes	Popovers
	Coffee	
DINNER		
Irish Stew with Dumplings		
Fish Croquettes		Celery
	Dinner Rolls	
Custard Soufflé		Creamy Sauce
Crackers		Cheese
	Coffee	
SUPPER		
Broiled Ham	Scalloped Potatoes	
	Brown Bread and Butter	
Cranberries		Cake
	Tea	

GET READY FOR OATS DAY.

January 14 Selected for Institute Talks Throughout the State.

The largest crop of oats grown in Kansas in many years was produced last year. Why? Was it an accident, or was it due to better methods of agriculture? The chances are largely in favor of better methods; and those better methods existed because of education. Will Kansas duplicate that oats crop in 1911? It will if the farmers avail themselves of the opportunity to study the question next week. January 14 is to be known as Oats Day in Kansas. The Kansas State Agricultural College invites the members of the farmers' institutes, three hundred in number, to meet in their respective places to discuss the topic, "More Bushels and Better Quality." This topic may be divided this way:

1. Methods of preparing the ground.
2. What crop should oats follow?
3. Is it well to apply manure to the ground in January?
4. Experiences with seeding after one, two or more diskings.
5. Experiences with seeding after early plowing.
6. Experiences with early disking and then plowing, followed by proper working.
7. Experiences on fall-plowed ground.
8. Reports on varieties.
9. Does it pay to use the fanning mill to clean the seed?
10. Time between first spring working and seeding.
11. Time between last working and seeding.
12. Reports on methods of seeding.
13. Reports on rate of seeding.
14. Reports on time of seeding.
15. Cutting for hay.
16. Importance of threshing soon after cutting.
17. Experiences in sowing oats and Canada peas, or (in West) Colorado peas for a hay crop.

Work your grief up into art and it is gone.—*Fra Elbertus.*

BEST CORN IN KANSAS.

S. G. TRENT, OF HIAWATHA, TOOK THE ASSOCIATION SWEEPSTAKES.

Reid's Yellow Dent, the Variety, Also Received the First Prize—C. H. Werner, of Troy, 17, Won First in the Boys' Class.

The sixth annual show of the Kansas Corn Breeders' Association closed December 30. The sweepstakes prize for the year went to S. G. Trent, of Hiawatha, Kansas, with ten ears of Reid's Yellow Dent. The winner of the sweepstakes premium, under the rules of the association, forfeited the first premium he had won in his class upon being awarded the sweepstakes premium. The sweepstakes premium, in addition to the purple ribbon, consisted of a Watt's combination feed grinder and corn sheller, worth \$35, and an Avery cultivator, worth \$18, making \$53 worth of farm machinery. Upon being forfeited by the winner of the sweepstakes prize, the first premium became second premium and forced backward every premium in the class. The first premium, a John Deere cultivator worth \$38, went to the winner of second place, John L. Grenniger, of Bendena, Kansas, with ten ears of Reid's Yellow Dent corn.

AN 18-YEAR-OLD WINNER.

In the boys' division for eastern Kansas, the first premium was awarded to C. H. Werner, of Troy, Kansas. He is about 18 years old. Werner won with ten ears of Reid's Yellow Dent corn, magnificent specimens upon which it was impossible to see more than one small piece of the cob and that at the butt. The corn was remarkably smooth, the kernels well placed and uniform, and the color excellent. Of course, all this was true, also, in the men's division, but particular attention was attracted to the corn grown by the boys, of whom more than 5,000 were entered in the contests in Kansas in 1910. Werner not only received his premium, a feed grinder worth \$35, but had the pleasure, also, of seeing his name upon the silver loving cup of the association, a trophy worth \$100, for the best ten ears of any kind of corn grown by any boy in Kansas in 1910. This cup remains in the office of the secretary of the Corn Breeders' Association as a permanent trophy.

THE GILMANS AGAIN.

Paul Gilman, of Leavenworth, with ten ears of Boone County White corn, won the second premium this year. Paul's father was for many years county superintendent of Leavenworth county. In 1906 he organized the first boys' corn contest of that county, interesting his own and many other boys in the work. Paul has been in every state contest since, winning a premium every year. In 1908 he won first prize.

In the boys' division for western Kansas, Clyde Penix, or Bunker Hill, with ten ears of Pride of Saline corn, won the first prize. Orley Gouthier, of Hill City, with the same breed of corn, won second premium.

The Montgomery painting, contested for every year in this state by the boys, was awarded this time to Merrill Hamm, of Holton, Kansas. The painting had been won for two years by Earl Willis, of Manhattan, to whom it would have gone, finally, had he won it this year, but Earl was nineteenth in the list this time. So once more the painting starts on its rounds.

The annual business meeting of the corn association, Thursday morning, last week, resulted in the electing of these officers:

E. Wilson, Lawrence, Kansas.....President
W. R. Hildreth, Altamont, Kansas.....Vice-President
E. G. Schafer, Manhattan, Kansas.....Secretary
R. A. Willis, Manhattan, Kansas.....Treasurer

A burglar in the home of Herman Sonken, the popular junk dealer, *The Star* says, stole, among other junk, a hat pin and a dozen late novels. The report says nothing about the \$2,167.52 in the lower bureau drawer or the \$197.50 in the baby's bank that the burglar overlooked. But, anyway, one thing is certain. If he isn't arrested for carrying the hat pin the late novels will finish him.

CARE FOR THE SHRUBS.

A FEW POINTERS ON WINTER PROTECTION FOR PLANTS.

The Freezing and Thawing of February and March Will Do a Lot of Harm that May Easily be Avoided.

Summer friends in the garden need protection when winter comes. It is an easy matter to carry the most delicate plants and shrubs over winter if a little labor is applied.

It is the freezing and thawing that injures plants. Even the majority of the so-called hardy plants need some protection, although they will survive a very low temperature if it is continuous. Another condition to be guarded against in the garden during the winter is the lifting and loosening of the soil about the roots of the plants, due to the action of the frost. When the earth about a bush is cracked and frozen the plant can get no moisture from the soil. There is danger, also, in orchards from the freezing and thawing of February and March. The south and west sides of the trees should be protected. Whatever form of protection is used should be put about the plants and trees only after the ground is solidly frozen. If it is done sooner, mice are likely to take advantage of it and live through the winter at the expense of the owner.

BUT THEY NEED AIR.

Plants must have air. If they are wrapped too tightly they will soon get too warm and the conditions will be the same as the freezing and thawing in the unprotected state. Perennials, especially, need very little mulching. The entire purpose of protection is to maintain an equable temperature about the plant, throughout the winter.

Two favorite methods of protecting roses are: Lay plants down and cover them with earth, not too thickly. They may be staked down and then covered with straw. When there are individual rose-bushes about the garden, every plant should be allowed a separate jacket of straight straw. In covering individual bushes the following method should be followed: If the plant is unable to stand erect, a stake should be driven into the ground beside it, the branches should be tied securely to the stake. Then a cap or hood of straight straw should be placed over the top of the plant. Straw should be placed all about the plant. In most cases, after the first layer is securely tied it is well to add a second. The whole covering should be tied in the middle and top and bottom. The top straws of the side layers should fit under the cap.

THE WORK WELL REPAID.

Rhododendrons and other evergreens need protection principally from the hot runs and dry winds of March. They should at least be shaded and a mulch three or four inches in depth placed on the ground about them. In some instances the whole bush has been boxed. This is effective but unsightly. Boards or evergreen boughs may be used to shade Rhododendrons and other shrubs of that kind. English ivy is easily saved by covering with straw mats.

In protecting perennials and bulb beds, the work is light. A covering of leaves, straw, manure, and coarse hay, three or four inches deep, is all that is needed. Straw manure should not be used unless nothing else is handy, as it has a tendency to pack too closely. Strawberries should be mulched with straw. Blackberries may be staked down and covered with earth. It is really very little work to save the shrubbery from the freezing and thawing of winter. A little work now will be more than repaid next summer.

HOW ABOUT BASKET-BALL?

Here's the First Question Agitating Athletic Circles in the College.

Are the Kansas Aggies to signalize their application for membership in the Missouri Valley Conference by cutting out basket-ball? This is the

question in athletic circles at the Kansas State Agricultural College at present, now that the sweaters for the men have been arranged for. From the way things are sizing up this year that seems very probable. None of the big games that were expected has materialized. The chaotic state of athletics the last term resulted in nothing being done about a basketball schedule until the other schools in the Missouri Valley had their schedules all arranged, so that it seems impossible to arrange for any games without further increasing the deficit in the treasury. One game to a trip will not pay expenses, and a large enough crowd cannot be accommodated in the Y. M. C. A. gymnasium to pay expenses of visiting teams. Besides, K. U. has refused to play on the Y. M. court, saying it is too small. However, if the new Nichols Gymnasium could be finished in time, the university would be perfectly willing to exchange games with K. S. A. C. But the gymnasium is not finished.

THE WHY OF LIVE STOCK.

Sheep, for Instance, Will Eat Almost Anything in the Fields.

Under present farm conditions many reasons exist why farmers should have live stock. There is always a certain amount of roughage, hay, and in many instances grain, that would be lost if there were no live stock on the farm. Especially is this true with sheep. They will live the entire winter on roughage in the corn and wheat fields and pasture that would otherwise be lost.

It should not be forgotten, either, that there is a pleasure in breeding and rearing fancy live stock that can be taken to the various stock shows and entered for prizes. Not only do the live stock shows give a breeder an opportunity to compete for prizes, but it is the greatest advertisement that he might desire.

The profit from live stock is twofold: It maintains fertility of the land and by so doing increases its value. Also, a much larger net return can be gained by feeding the products grown on the land to live stock than when the products are sold directly from the field. The farmer who keeps live stock has solved the question as to distribution of labor. In late fall and winter, when farm work is at a standstill, he can be fattening live stock for market. This stock can all be disposed of by the time spring work begins.

DAIRY ESSAYS THAT WON.

Three Bright Boys Reported the Recent College Train Lectures.

Before the Kansas Agricultural College sent its recent dairy special over the southwestern lines of the Santa Fé railway, announcement was made that three prizes would be given for the best essays written by high school or grammar school students who might attend the lectures. In more than thirty villages and towns there were delegations of high school students at the stations to hear the lectures by the college speakers.

The committee on awards has given the first prize of \$5 to Robert Ingle, Harper, Kansas; second prize, \$3, to Lowell Mason, Mulvane, Kansas; third prize, \$2, to Will Scheufler, Great Bend, Kansas.

These Are Busy Hens.

The poultry exhibit in this year's state institute meeting at the Kansas State Agricultural College was far more interesting than that of any other year. In the past the exhibits have consisted exclusively of birds shown for prizes by outsiders. This year the only birds shown were entered by the agricultural college. More than 50 chickens were shown, including hen Number 7759, a single-comb White Leghorn which has a record of 343 eggs in 19 months; Number 798, a White Plymouth Rock hen having a record of 220 eggs in 12 months; and Number 8162, a single-comb White Leghorn hen that has contributed 188 eggs in 10½ months. Poultry appliances of every kind, including, of course, many makes of incubators—some of them in actual use—were a part of the exhibit.

REALLY OFFICERS, NOW.

Captain Boice's Staff and Field Heads Have Received Their Commissions.

With ceremonies befitting the occasion, and very pretty and interesting, too, commissions were presented just before college closed to these persons connected with the cadet corps:

Commissioned Field and Staff Officers.—T. B. Nafziger, major first battalion; R. A. Branson, major second battalion; John E. Jenkins, regimental adjutant; C. G. Fry, captain and regimental quartermaster.

Captains.—O'Brien, Getty, Anderson, Turner, Campbell, and Sanspacher.

First Lieutenants.—Springer, Hungerford, Newkirk, Leech, Wise, Janer.

Second Lieutenants.—Buzzaard, Hutto, Pierce, Cole, Moore, Ned Smith.

Henry Jackson Waters, president of the college and *de facto* commanding officer of the corps, with W. E. Blackburn, president of the board of regents, Edwin Taylor and A. L. Sponsler, regents, were present in chapel when the commissions were handed out. The corps stood at attention while the president and regents entered.

THE FALL CLASS SCHEDULES.

Showing the Names of Instructors, Hours and Numbers Involved.

In preparing a college paper it becomes necessary, occasionally, for the sake of records, to use much space in presenting matter that may not, to some readers, seem important. The schedules here used are interesting to 2,400 students, to the faculty, and to every person desiring to confirm the reported crowded condition of the college classes.

Class periods are in bold-face type. Departments are arranged alphabetically.

Agronomy.

Prof. Jardine: 4, S., Farm Crops IV, 14 (with Asst. Schafer).

Asst. P. of Call: 1, Th., Soils III, 19. 5-7, TT, Soils III Lab., 19.

Asst. Schafer: 1-2, TT, Grain Judging, 42. 1-2, WF, Grain Judging, 23. 3, Tu., Farm Crops I & II, 59. 4, S., (with Prof. Jardine), Farm Crops IV, 14. 4, TT, Farm Crops III, 38. 5-6, S., Farm Crops III Lab., 36. 5-6, TT, Farm Crops I & II Lab., 57. 5-6, WF, Farm Crops IV Lab., 12.

Animal Husbandry.

Asst. Patterson: 4, Tu., Live Stock I & II Lec., 82. 5-6, WF, Live Stock I & II Lab., 82. 5-6, WF, Stock Judging, 1, 80.

Asst. Wright: 1-4, M., Advanced Stock Judging, 23. 3-4, WF, Stock Judging I, 51. 4, TT, Live Stock II, 27. 5-8, S., Live Stock II Lab., 28. 5-6, WF, Pedigrees, 20.

Applied Mechanics and Hydraulics.

Prof. Seaton. On leave of absence during season 1910-11. Class in Applied Mechanics taught by Prof. Potter.

Architecture.

Prof. Walters: 1, Residences (and special), 8. 2, Heating and Plumbing (and special), 15. 3, History of Architecture, 12. 4, Trusses (and Architectural Drawing), 8. 5-6, Architectural Composition, 16. 1-4, M., Architectural Composition, 13. 5-6, M., Architectural Composition, 6. 1-4, S., Water Color, Architectural Drawing, Special, 22.

Inst. Weeks: 1-2, TT, Short Course Color and Design, 53; WF, Color and Design II, 10. 3-4, TT, Short Course Color and Design, 35; WF, Color and Design I, 14. 5-6, TT, Short Course Color and Design, 39; WF, Color and Design II, 18.

Asst. Putnam: 1-2, M., Freehand Drawing, 32; WF, Freehand Drawing, 64; S., Geometrical Drawing, 36. 3-4, M., Freehand Drawing, 10; WF, Freehand Drawing, 39; S., Freehand Drawing, 38. 5-6, M., Freehand Drawing, 24; TT, Freehand Drawing, 31; WF, Object Drawing, 44.

Asst. Harris: 1-2, WF, Descriptive Geometry Lab., 17. 3, MF, Descriptive Geometry I and II, 28. 4, MW, Descriptive Geometry I and II, 28. 5-6, WF, Descriptive Geometry Lab., 33. 5-6, S., Geometrical Drawing, 48. 5-6, TT (also S. 1-4), Modeling, I and II, 6. 5-8, M., Geometrical Drawing, 31.

Asst. Morton: 1-2, Tu., Freehand Drawing, 18; S., Geometrical Drawing, 35. 3-4, Geometrical Drawing, TT, 36; WF, 38; S., 44. 5-6, WF, Freehand Drawing, 43. 7-8, WF, Freehand Drawing, 43. 1-4, M., Geometrical Drawing, 37. 5-8, M., Geometrical Drawing, 44.

Bacteriology.

Prof. Slack: 2, MS, General Bacteriology, 81; 3, MS, General Bacteriology, 80. 6, MS, General Bacteriology, 56.

Inst. Bushnell: 1-2, MS, General Bacteriology Lab., 26. 3-4, TT, General Bacteriology Lab., 32. 4, WF, Soil Bacteriology, 5. 5-6, WF, Soil Bacteriology Lab., 5. 7-8, WF, General Bacteriology Lab., 28.

Asst. Hayes: General Bacteriology Lab., 3-4, WF, 27; 5-6, TT, 32; 5-6, WF, 28; 7-8, TT, 34.

Botany.

Prof. Roberts: 1-2, Elementary Botany I Lab. (with Asst. Rose), M., 26; S., 36. 5, MS, Plant Anatomy, 35.

Asst. Prof. Davis: 2, TT, Plant Anatomy, 14. 4, WF, Elementary Botany I, 35. 6, WF, Elementary Botany I, 18. 3-4, M., El Botany I Lab., 30; S., 31. 5-6, M., El Botany I Lab., 21; TT, Plant Anatomy Lab., 25; S., El Botany I Lab., 20.

Asst. Rose: Botany I Lab., 1-2, M., 26; 1-2, S., 31; 3-4, S., 22. 2, WF, Botany I, 38. 5, TT, Botany I, 40.

Asst. Graff: 1-2, WF, Plant Pathology Lab., 17. 1-2, M., El Botany Lab., 25; S., 30. 3, S., Plant Pathology, 17. Adv. Plant Pathology, and Diseases of Forest Trees, one student for each.

Asst. Miller: 1, WF, Botany I, 22. 3, WF, Botany I, 38. Botany I Lab., 4. 3-4, 29; 5-6, 14; 5-6, S., 23. 5-6, WF, Plant Anatomy Lab., 28.

Asst. Link: 1, TT, Botany I, 49. 3, TT, Botany I, 29. 6, TT, Botany I, 26.

Chemistry.

Prof. Willard: 1, TWTF, Human Nutrition, 70. 2, TWTF, Human Nutrition, 43. 3, MTWF, Physiological Chemistry I, 12.

Asst. Prof. King: Chemistry I (new) Lec., Tu., 2. 235; 5, 221. 2, MWF, Inorganic Chemistry I, 7. Chemistry I (old) Rec., TuF, 1, 26; 3,

38; 4, 22. Chemistry I (new) Rec., ThS, 1, 43; 2, 49; 3, 35; 4, 16.

Asst. Prof. Whelan: Chemistry I (old) Lec., MW, 3, 101; 4, 80. Chemistry I (old) Rec., TuF, 3, 35; 4, 80. Chemistry I (new) Rec., ThS, 1, 40; 3, 28; 4, 42. 5, MWF, Organic Chemistry I, 3. 6, TWTF, Chemistry I and II, 30-40. 5-8, S., Organic Chemistry I Lab., 2.

Asst. Prof. Swanson: 1, MS, Agricultural Chemistry I, 52. 3-4, WF, Agricultural Chemistry I Lab., 24. 5-6, TT, Agricultural Chemistry I Lab., 27. 1-4, S., Quantitative Analysis, 14.

Instructor Newman: 1-2, WF, Chemistry I Lab., third 4t., 15; Chemistry III Lab., first 4t., 24. 3, TWTF, Geology II, after mid-term. 20. 5, TWTF, Chemistry II and III, 65-73. 6, Chemistry I (new) ThS, 48; Chemistry I (old) TuF, 10.

Asst. Hughes: 2, ThS, Chemistry I (new) Rec., 45. 5, ThS, Chemistry I (new) Rec., 52. Chemistry I Lab. (new), 1-2, M., 57; W., 48; F., 37. 3-4, M., 68; W., 44; F., 34. 5-6, M., 70; W., 42. 3-4, TT, Chemistry I Lab. (old), 6. Assisted by Miss Lewison M., 1-2, W., 5-6 and F., 1-2.

Asst. Miller: Chemistry I Lab. (old), 1-2, TT, 12; WF, 30; MS, 33. 5-6, TT, 36; WF, 24; MS, 27. Chemistry III Lab., 3-4, WF, 45 (assisted by Miss Lewis).

Miss Lewis: 1-2, TT, Chemistry III Lab., 14. 3-4, TT, Chemistry I and III Lab., 13-22. Assisted by Mr. Hughes on M., WF, 1-2, and W., 5-6. Assists Mr. Miller WF, 3-4.

Civil Engineering.

Prof. Conrad: 1, TWTF, Applied Mechanics I, 16. 5-7, Graphic Statics, Tu., 21; Th., 12. 5-6, WF, Civil Engineering Drawing III, 17. 5-7, M., Surveying V, 7.

Asst. Stone: 1-4, M., Surveying II, 17. Surveying I, 1-2, TT, 24; 3-4, TT, 11; 5-6, TT, 29; 5-6, WF, 11.

Dairy Husbandry.

Asst. Prof. Reed: 2, WF, Dairy Buildings and Equipment, 6. 3, MW, Dairying I, 43. 3, TT, Dairy Inspection, 12. 4, MW, Dairying, 44. 5-6, Live Stock III, TT, 42; WF, 48.

Asst. Rudnick: Dairying I Lab., M., 1-4, 12; M., 5-8, 51; S., 5-8, 39.

Domestic Art.

Prof. Becker: Domestic Art VII, 3, WF, 51; 5, WF, 21. 5-6, TT, Domestic Art VIII, 15. 4, S., Domestic Art VIII Lec., 13.

Inst. Stump: 1-2, TWTF, Short Course Sewing, 15. 3, S., Sewing I Lec., 22. 3-4, TT, Sewing I, 27; WF, Short Course Sewing, 15. 5-6, WFS, Sewing I, 17.

Inst. Cowles: 1, S., Sewing I Lec., 15. 1-2, TT, Sewing I, 28. 1-2, WF, and 5-6, TWTF, Short Course Sewing, 26. 3-4, WFS, Sewing I, 21.

Asst. Donaldson: 1-2, TT, Sewing I, 24; WF, and 5-6 daily, Short Course Sewing, 29. 3-4, TT, Sewing II, 21; WF, Sewing III, 19. 2, S., Sewing I, Lec., 23.

Asst. Byerly: 1-2, WFS, Sewing I, 11. 3-4 daily and 5-6, WF, Short Course Sewing, 18. 5-6, TT, Sewing I, 18.

Asst. Portney: 1-2, TT, and 1-4, WF, Short Course Sewing, 18.

Mrs. Orr: 1-2, WFS, Sewing I, 9. 3-4, daily, and 5-6, WF, Short Course Sewing, 19. 5-6, TT, Sewing I, 20.

Domestic Science.

Prof. VanZile: 2, Home Management, 18. 4, Home Management, 17.

Asst. Prof. Dow: 1, TT, Dietetics, 31. 5-6, TT, Dietetics Lab., 20.

Asst. Lindsey: 3, TT, Dietetics, 31. 5-6, TT, Dietetics Lab., 20; WF, Dietetics Lab., 22.

Asst. Huse: 1-2, daily, Short Course Cooking, 20. 3-4, WF, Domestic Science I (new), 11.

Asst. Miles: 5-6, daily, Short Course Cooking, 17.

Asst. Noyes: 1-2, WF, Domestic Science I (new), 14. 3-4, daily, Short Course Cooking, 20.

Asst. Stephens: 3-4, daily, Short Course Cooking, 20. 5-6, TT, Domestic Science I (new), 9.

Asst. Storms: 3-4, daily, Short Course Cooking, 18. 5-6, daily, Short Course Cooking, 20.

Asst. Humphrey: 1-2, daily, Short Course Cooking, 20. 5-6, WF, Domestic Science I (new), 16.

Economics and Public Speaking.

Prof. Kammeyer: 2, Public Speaking, 30. 3, Agricultural Economics, 62. 4, Sociology, 24.

Asst. Johnston: Public Speaking, 4, 41; 5, 12; 6, 12.

Electrical Engineering.

Prof. Eyer: 1, D.C. Machines II, 25. D.C. Machines II Lab., 13.

Asst. Lane: Electrical Instruments & Calibration & Lab., 3-4, TT, WFS, 11. 5-6, MS, D. C. Machines II Lab., 11.

English.

Prof. Brink: 1, English Literature I, 23. 2, College Rhetoric, 35. 3, English Literature I, 36.

Asso. Prof. Seaton: 1, Advanced Composition, 21. 2, Elementary Composition, 25. 3, College Rhetoric, 35. 4, Classics, 31.

Asst. Prof. Beall: 1, College Rhetoric, 24. 2, English Literature I, 29. 3, English Readings, 10. 5, College Rhetoric, 22.

Inst. Rice: 1, English Readings, 23. 2, Classics, 34. 5, Rhetoric I, 19. 6, College Rhetoric, 14.

Inst. Leonard: 2, Advanced Grammar, 17. 3, Advanced Grammar, 30. 5, Elementary Composition, 23. 6, Advanced Composition, 10.

Asst. Farley: 3, Elementary Composition, 35. 4, Advanced Grammar, 41. 5, Classics, 16. 6, Advanced Grammar, 41.

Asst. Knight: 2, Advanced Composition, 24. 3, Classics, 34. 5, English Readings, 18. 6, Rhetoric I, 17.

Asst. Root: 1, Classics, 35. 4, College Rhetoric, 36. 5, Advanced Composition, 12. 6, Classics, 14.

Asst. Crawford: 1, Advanced Grammar, 22. 3, Rhetoric I, 26. 4, Rhetoric I, 27. 5, Advanced Grammar, 46.

Miss Smith: 2, Grammar B, 15. 4, Grammar A, 15.

Entomology and Zoology.

Prof. Headlee: 1, TT, Zoology I (new), 22. 2, Entomology I, TWTF, 39. 3, Zoology I (old), 49. 7-8, TT, Entomology (History), 2.

Inst. Nabours: 1, Geology I, 47. 2, Geology I, 35. 3, Geology II (until mid-term), 20. 4, WF Embryology, 33. Taxonomic Zoology, 2, at irregular hours.

Asst. Milliken: Zoology I (old) Lab., 1-2, TT, 23; WF, 28. 5-6, TT, 24; WF, 22. Zoology I (new), Lab., 1-2, MS, 21. 4, Zoology I (old), 49.

German.

Prof. Cortelyou: 2, German IV, 6. 4, German V, 3. 5, German IV, 6. 7, German I.

Asst. Meiner: 1, German I, 34. 3, German I, 33. 5, German III, 15. 6, German I, 14.

Heat and Power.

Supt. Lund: Boiler and Engine Practice, daily, 2.

History and Civics.

Prof. Price: 1, American History, 20. 2, Constitutional History, 44. 3, Constitutional History, 19. 4, American History, 40.

Inst. Taylor: Civics I, 43; 2, 50; 4, 33. 6, Constitutional History, 14.

Asst. Reynolds: 1, TT, Ancient History, 24. 2, MWF, Medieval History, 28. 3, Modern History, 34. 5, Modern History, 20. 6, TT, Ancient History, 20.

Asst. Mack: Ancient History, MWF, 1, 31; 3, 23; 5, 22; 6, 21. Medieval History, 2, MWF, 26.

Asst. Gordon: 1, U. S. History, B, 20. Ancient History, TT, S, 2, 36; 3, 31; 4, 31.

Industrial Journalism.

Prof. Dillon: Industrial Journalism I, 1, daily, 19.

Horticulture and Forestry.

Prof. Dickens: 2, TT, Pomology II, 6. 3-4, TT, Pomology I, 15. 5-6, S., Pomology II Lab., 6.

Asst. Cunningham: 1, Horticulture, 7. 5-6, WF, Hort. Lab., 6.

Mathematics.

Prof. Remick: 1, Differential Calculus, 15. 2, Integral Calculus, 10. 3, Analytical Geometry, 25.

Asst. Prof. Andrews: 3, Algebra II, 16. 4, Integral Calculus, 2.

Asst. Prof. Barnett: 1, Bookkeeping, 7. 2, Algebra II, 20. 3, Algebra I, 16. 4, Bookkeeping, 8.

Inst. Zeininger: 1, Geometry II, 15. 2, Trigonometry, 36. 4, Geometry II, 19. 5, College Algebra, 18.

Asst. Holroyd: 1, Geometry I, 45. 2, Geometry, I, 47. 5, Algebra III, 9. 6, Algebra II, 22.

Asst. McGarrath: 1, Trigonometry, 42. 2, Geometry II, 32. 3, Geometry II, 33. 4, Algebra III, 40.

Asst. Porter: 1, Algebra III, 23. 2, Differential Calculus, 14. 5, Geometry I, 19. 6, Algebra III, 17.

Asst. Kay: 1, Algebra II, 34. 3, Algebra I, 19. 4, Algebra I, 24. 6, Trigonometry, 21.

Asst. White: 1, Integral Calculus, 8. 2, Algebra III, 20. 3, Geometry I, 37. 4, Analytical Geometry, 16.

Asst. Clevenger: 1, College Algebra, 35. 4, Algebra I, 21. 5, Algebra I, 27. 6, Geometry I, 18.</

THE KANSAS INDUSTRIALIST

Volume 37

Kansas State Agricultural College, Manhattan, Saturday, January 14, 1911

Number 15

HELP FOR THE PACKERS.

GENEROUS FARMERS PAY MILLIONS FOR THE MEAT THEY PRODUCED.

President Waters Quotes Some Startling Figures as the Result of an Inquiry in Kansas.

The farmers of Kansas, one of the first live-stock states in the union, buy from the butcher shops, annually, from 3½ million to 7 million dollars worth of meat. They produce this meat themselves. It consists, chiefly, of breakfast bacon, ham, salt pork, and fresh beef. These meats will retail at from 35 to 40 per cent more than they cost wholesale at the packing-houses, if the figures of Secretary Wilson are correct. It is safe to say that, allowing for transportation from the farm to the packing-house, the killing, selling, etc., these meats, when returned to the farmer through the retailer, are bought by him at an increase of at least 50 per cent.

In doing this they contribute to the profits of the other man one-half the value of the stuff they themselves produce.

BEEF CLUBS NEEDED.

The foregoing somewhat startling facts were part of a carefully prepared address delivered, a few days ago, by Henry J. Waters, president of the Kansas State Agricultural College, speaking to the Improved Live Stock Breeders' Association at Topeka. The title of this address was "The American Farmer as a Meat Packer." President Waters told the interesting answers from a series of questions he had sent to all the farmers in Kansas, in every one of its 105 counties. The replies came from 97 counties. Summarized, they show that very few farmers cure all the meat that can be cured for their use; that there is very little coöperation in killing, as might be the case if beef clubs were organized. It is the common practice, these statistics show, to depend upon the butcher shops and farm poultry for meat in from six to nine months of the year. Estimates as to the meat bought by the average farm family of five persons varied from \$10 to \$300 a year. The average was \$55. This would make the Kansas farmers' total meat bill \$7,335,000 a year—enough to support the state government and the schools for two years.

WHY NO CURING NOW?

Why have the farmers ceased to cure meat for themselves? President Waters inquired. Being an expert in this work himself and believing in imparting the knowledge of it to others, President Waters was more than ordinarily concerned. In former years, he said, when the farm was more nearly the center of family life, when the family lived more completely upon the produce of the farm and less upon breakfast foods and canned goods, it was the practice to cure all the meats required by the family for the year, except that from poultry. Beef clubs coöperated in such work. But the increased prosperity of the farmer and the recent high prices of animals on the hoof have permitted the meat-curing industry to become almost a lost art.

NOT MUCH EQUIPMENT NEEDED.

President Waters' questions to the farmers brought out the answer, generally, that they did not know how to cure meat. The second largest number told of the lack of necessary facilities, smoke-house, etc.; some reported that the meat spoiled, another way of confessing ignorance of how to cure it. Others said insects interfered with its keeping, another detail of knowing how; it became too salty and unpalatable; it was strong in the summer—all confessions of ignorance.

President Waters declared it was a mistaken idea that an elaborate equip-

ment was necessary in curing meat. A wooden smoke-house with earth floor will answer every purpose, and the profit paid to the packing-house and the butcher shop for one year, on the basis of \$55, would buy all the equipment needed by any farmer, although not the best or the most convenient. Killing should be done by the end of January, and, for best results, by Christmas time. This will allow time to cure and smoke the meat and put it away before the arrival of the flies which produce the skippers about which so many farmers complain. You should have a March or April hog, weighing 200 to 225 pounds. The curing is a matter of personal detail and attention, President Waters

A LIVING IS WASTED.

PROF. TENEYCK TALKS OF THE LOSS ON MANY FARMS.

New England Farmers Would Gladly Have What Western Agriculturists Throw Away—A Hundred Million Annually for Machinery.

The thing that impresses a New England farmer the most, as he travels through the Middle West, is the immense waste of material resources on the farms. It has been said that the eastern farmer could live and make a profit on what the western farmer wastes. The wastes and leaks are great in number and importance. Perhaps

A Vital Need.

The need for agricultural education is real and vital. It is pressed upon us by economic and social conditions. It is in line with the movement of the age.

—Kenyon L. Butterfield, Chapters in Rural Progress.

says. There are a great many ways to produce ham or bacon with very superior flavor. One of the first essentials is plenty of time. The reason the packing-house ham is so lacking in flavor is that it is cured rapidly and quickly sold. There are two methods in curing meat, the dry cure and the brine cure. Both are good. The meat curer should take the one he happens to fancy, but for production of the highest quality and richest flavor the dry cure is superior. Brine destroys a considerable quantity of the soluble protein in meat, and that is what gives the flavor. Any piece of meat soaked, or even wet, is never again as good as it was.

NO ONE CERTAIN WAY.

There is no just right and no just wrong way in curing meats. It is largely a matter of tests and judgment. THE KANSAS INDUSTRIALIST will print, next week, President Waters' famous formula for curing ham.

Here are a few figures showing what should be produced from a 250-pound hog:

35 pounds ham, at 17 cents.....	\$ 5 95
30 pounds shoulder, at 10 cents.....	3 00
25 pounds thick sides, at 10 cents.....	2 50
21 pounds thin sides, at 20 cents.....	4 20
30 pounds lard, at 15 cents.....	4 50
40 pounds sparerib, head, feet, back bone, at 7 cents.....	2 80
18 pounds sausage, at 20 cents.....	3 60
Total.....	\$26 55

The hog was worth at home \$18.10. Had the meat been cured there, the farmer would have cleared the ham at reasonable prices—\$5.95—and almost the hams and shoulders, or about 40 per cent profit. The weights quoted here are green weights. The joints will increase in weight in salt and decrease in the smoke, so it is about an even break by the middle of the summer.

THE ENROLMENT GROWS.

Industrial Journalism, too, is Attracting Attention—Fifty Students in the Classes.

Twenty-one hundred students are enrolled for the winter term. The short course, a term of ten weeks established for those who cannot spend two or four years in college, now has 396 students. Of this number, 110 are girls. The school of industrial journalism almost trebled its enrolment this year. Fifty students, three of them young women, are now taught in two classes. Of this number, five or six young men intend to become city newspaper writers, others have ambitions to own country papers, and still others are taking the course for the ease in writing it is hoped to impart. Most of the young men are from the agricultural course, animal husbandry and dairying.

the greatest loss is damage to the feeding value of roughage by exposure to the weather. Most of this loss is unnecessary and could be avoided if barns were built to hold this roughage.

A. M. TenEyck, professor of farm management at the Kansas State Agricultural College, believes, after careful investigation extending over a series of years, that the extra profits that result from keeping hay under cover will pay the interest on the money and also pay for the building in a very few years.

LABOR-SAVING DEVICES.

The second greatest waste is the unnecessary depreciation of farm machinery. American farmers buy 100 million dollars' worth of farm machinery every year. Most of them reduce the efficiency of these labor-saving agents rapidly by careless methods of handling. Prof. TenEyck has proved that money invested in machinery sheds will return at least 33½ per cent profit.

Careless methods of feeding cause a large leak on many farms. Perhaps

can farmer is the most wasteful farmer on earth. However, there are some hopeful signs of improvement in farm administration. The farmer is beginning to realize the importance of the scientific principles that are fundamental in his business and the importance of the true higher economy in farm management.

TAKE STOCK OF YOURSELF.

President Waters Tells the Boys to Avoid Extremes—Be Somebody.

"The beginning of a term is a good time to take account of stock," said President Waters, at the opening of the winter term. It's a good time to see just on which side of the ledger the balance lies.

Advice from those that have had experience, the president said, would, if heeded, ward off many a hard knock. Heretofore the majority of the students has been immune from all advice.

Here is a man who holds an office in a debating society, in a class, is an athlete, is perhaps a member of the Herald staff. He does almost everything except study. But he has made a mistake.

Here is a man who spends most of his available time in study or in the laboratory. He does not add anything to the social life of the community, does not do his share. He has made a mistake, also.

To keep a proper balance between these two extremes, is the question that is up to every student, individually. No absolute standard can be set for 2,400 students. The personal judgment of every student must be the standard.

The college community is a miniature world. The place one takes in college life will be the place he will take in the world when college days have passed.

SOLONS VISIT THE COLLEGE.

Representative Burtis, of Wilson County, Spoke in Students' Assembly.

Walter J. Burtis, '87, legislative representative for Wilson county, spoke Saturday morning, last week, in the students' assembly. J. N. Herr, representative for Barber county, also was a visitor.

The late F. C. Burtis was an alumnus of the Kansas State Agricultural

FIX UP THE FRONT YARD.

WHAT'S THE MATTER WITH FARMERS IN THIS RESPECT?

Why Are so Few Rural Homes Surrounded with Pretty Lawns, a Few Flowers and Walks? Too Busy, too Tired or too Lazy?

Just why the average farmer cares so little for the appearance of his front yard—if it be permissible to call the plot of ground in front of his house a yard—is a mystery. It is hard to understand. Is the average farmer careless, does he lack a sense of appropriateness, or hasn't he the time to put things right? What's the matter with him?

Some of the neatest yards in cities represent the labor and thought of men that put in as long hours in offices or shops as the farmer works in his fields. And they have real homes, too, these city workers. It is not a matter of money. These homes are owned, or rented, by men that have only their time to invest, early in the morning or after supper in many cases, and a few ideas as to what it takes to make an attractive yard.

KNOW YOUR FAMILY.

A well-kept lawn, some trees, a few flowers, a porch that is inviting—a good place to enjoy and get acquainted with one's family and friends, or to read awhile—these add immeasurably to the joy of living. Their influence in keeping the family circle intact and contented cannot be overestimated, either.

A home should be more than a house where one eats and sleeps. The farmer complains that his children tire of the farm and go to the city, in search of something—they don't know exactly what, but it is something they miss at home. The fact that too few of the country houses and their surroundings are really attractive may be one of the reasons.

A "HOMEY" PORCH.

It is a safe venture that a neat, well-kept yard, a walk, maybe, leading to a good-sized, "homey" porch, would do much toward starting the social life that the country is accused, rightfully or wrongfully, of lacking. Little things, these? Well, life and its living is made up of little things.

It is a safe guess, also, that soon after a farmer has provided a walk and shrubbery and porch, he will not be content with a house and inside conditions that do not harmonize with the outside. His house will become a home. It will be a good place to live—a place that will interest and attract his boys and girls and their friends. And when the farm home is made interesting and attractive the problem of how to keep children on the farm will be much nearer solution.

The Y. M. C. A.'s Fame.

The national publication of the Y. M. C. A., *Association Men*, for January gives one page to the work of that organization in Manhattan. Pictures are printed showing the association building, and the K. S. A. C. banner in several conferences in other cities.

LEARNING DAIRYING.

Here's Proof of How the Coming Farmer Will Operate His Business.

O. E. Reed, assistant professor of dairying, has a record class. In one class in dairying he has 224 short-course students.

Anyone Else, Now?

Edison is quoted as saying that there will be no work for the horse to do in a few years. Can it be that Mr. Edison is in his dotage?—*The Emporia Gazette*.

No, Uncle Walt: It's his voltage.

The Meaning of Extension.

If farmers and their families cannot go to college, the college must be taken to them. That is what is done in the 300 institutes in the 105 counties of Kansas. Some counties have five or six institutes with attendances of 500 or 600.

Think of the influence that sort of work has on the state's farming! Are you going to encourage that kind of activity, Mr. Lawmaker, or do you intend to vote against it? Approximately, 100,000 farmers were benefited last year in these meetings. They wouldn't have attended if they didn't favor the idea.

What do you think about it, Mr. Lawmaker? Perhaps you're at the head of an institute yourself. Isn't it a fine asset in the community?

the greatest sin under the sun is head is the lack of balance in the ration. In many cases absolutely no attention is paid to balancing the two great divisions of foods: carbohydrates and protein. As a result, the best and most economical results are not obtained. One reason for this is that not many persons would know the difference between carbohydrates and protein if they met them in the yard. Agricultural education is remedying this.

The waste that might be classed as the greatest of them all, and is certain to entail the most serious consequences upon generations yet unborn, is the waste of soil fertility. The soil management methods practiced on many tenant grain farms are absolutely vicious and can result only in soil exhaustion.

It is true that in general the Ameri-

College and afterward became an instructor in animal husbandry. Later he was professor of animal husbandry in the agricultural college of Oklahoma. He died recently.

The Y. M. C. A.'s Campaign.

The Young Men's Christian Association will have an evangelistic campaign January 24 to 29. "Dad" Elliott, international Y. M. C. A. secretary for the West, who has won a warm spot in K. S. A. C.'s affection in previous visits, will be the chief speaker. C. W. Whitehair and A. G. Pearson, of the state committee, and H. L. Heinzman, of Topeka, will be the outside speakers. Mass meetings for the men will be held every evening from 6:30 to 8 o'clock. The Y. W. C. A. will have a series of meetings at the same time.

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PROF. C. J. DILLON Managing Editor
DR. J. D. WALTERS Local Editor

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IN THE LONG-HORN DAYS.

That was a fine editorial published not long ago by Henry Wallace, of Des Moines, Iowa, the veteran editor of *Wallace's Farmer*. It drew attention sharply to the fact that farmers who sneered at "book farming" are rapidly being converted to better things or are disappearing from the earth they abused. Mr. Wallace speaks with authority. He has lived through about as much trouble as the agricultural colleges have had in getting farmers to realize the value of things scientific.

It is not so very many years ago that cow-men in western Kansas considered it a personal affront if a man came to town wearing a derby. A plow or a fence was the occasion for a loud yawp of derision. But that type of cow-man has gone. If he jolts into the Kansas City or Chicago stockyards nowadays he is as tame as a member of the Soldiers' Home two days after pension payment. He will eat out of the hand like a pet rabbit. With him has gone most of the anti-scientific farmers who broke the short-grass sod of Finney and Ford and Kearney and Hamilton and other western counties. These were the men who dropped five kernels in a furrow, covered them with the next slice, and grumbled if the corn came out.

Most of that old class of farmers were apostles of crudity, but they served the mighty purpose of driving the long horns back farther and farther into the hills, of opening the way for the new agriculture that gave thought to maintaining soil fertility and the rotating of crops. It was a transformation, within the first thirty years of men still young. It was a change that included the whole marvelous history of a great state from buffalo and coyote and antelope and prairie-dog to fields of waving grain that is not surpassed anywhere from Bangor, Maine, to 'Frisco. It was a wonderful shifting from haphazard, hit-or-miss methods to modern, scientific farming ushered into the West by men who knew what they were doing. It was, finally, and emphatically, a metamorphosis impossible, even with the sturdy race that has peopled Kansas in the last twenty years, had it not been for the tireless work of the hopeful men at the head of the state's agricultural college at Manhattan.

Think that over, Mr. Lawmaker at Topeka, as you think of the duties and responsibilities of a representative. Think it over. The men and women who put Kansas where it is to-day are entitled to something more than considerations of party expediency. They are worthy the best the college and the experiment stations and the institutes can give them.

And that is exactly what they are to receive if the agricultural college is encouraged in its big mission. This mission is to make Kansas the foremost agricultural state in the Union. Think it over.

THE UNPROFITABLE TENANT.

"In choosing a farm tenant for best results, honesty is the first essential, but efficiency is equally important," says H. C. Taylor, of the college of agriculture of the University of Wisconsin. The usual origin of trouble between landlord and tenant is in conditions unthought of when the contract

was made. Such troubles are always expensive, offsetting to a marked degree the legitimate returns from the land.

The most profitable man to have on the farm is not necessarily the one who bids the highest for the privilege. Landowners are inclined to be careless in stating how the land is to be used and the condition in which the land and the buildings are to be left by the tenant at the expiration of the contract period. The tenant who is allowed a free hand in cultivating the farm can well afford to pay liberally for the privilege, for he may plow up the rich old pastures, raise any crops without consideration of their exhausting qualities, and leave the farm in any shape at the end of the tenancy. Such a program produces temporary profit, but handicaps the future tenant. Sacrificing capital for the sake of reaping a high rate of interest on his investment for a short time is not a good business policy for any landowner to pursue.

A landowner should choose a fair-minded tenant so as to avoid appealing to the law to enforce his rights. Such a man will be a profitable investment, whether or not he was the highest bidder at the outset, for he can be trusted to do the right thing and no chances are being taken on a doubtful man's character.

Many Kansas farms are being rented for a share of the crops. The managing ability of the tenant is an important matter. It demands more attention from the landowner than do the exact terms of the contract. A few dollars sacrificed in the beginning will return as profit before the tenancy has expired. The landlord who insists on driving a hard bargain will be the final loser. An overworked farm is as valueless as an overworked and stunted farm animal. If the land is managed properly it will increase in productivity, but a poorly treated farm will decrease in value through decreased fertility and consequent small productivity.

WHAT THE COLLEGE HAS DONE.

If the wheat yield of Kansas is largely increased this year; if the loss from chinch-bugs, Hessian fly and mill insects is greatly reduced or eliminated; if hog-cholera, which has cost the farmers millions, is wiped out in the near future; if farmers and other live-stock breeders learn more about animal husbandry; if the state's dairy interests prosper more than in the past, credit will be due to the exceptional activities of the Kansas State Agricultural College.

In the foregoing sentence is summed up the story of the big problems that have confronted the state's agricultural population. In solving them the college, with its staff of experts, resident or in the field, has put forth every effort possible. To improve farming conditions by inducing better methods has been the constant aim.

But the agricultural college has done more: In more than 300 institutes, scattered through the state's 105 counties, it has emphasized continually the importance of maintaining soil fertility and of utilizing, to the best possible advantage, every product of the farm so that the soil might not be impoverished, and the state's standard of agriculture be thereby impaired, through improvident and ill-advised cropping. In every department touching the farmers' interests, from the family to the field, the college influence has been exerted for the betterment of home and product—and with the most gratifying results.

But the state-wide influence of the agricultural college has been demonstrated in many ways apart from the notable experiments of the year. Its activities at the Western Kansas, or Fort Hays branch station have alone commanded the highest commendation of the farmers and the general public familiar with the work. More than ten thousand bushels of pedigreed seed wheat were produced at that station last year, some fields yielding 40 bushels an acre. Work of the profoundest importance to every farmer—and the world—included tests to conserve moisture; producing crops with lim-

ited rainfall; to prevent soil-drifting; to grow drouth-resisting crops; and studies of live stock especially adapted to western Kansas. Special forest plantings at this station are expected to show what may be done in checking wind and soil-blowing damage.

It is believed that Kansas produces a million bushels more wheat annually now than it formerly did, because of the improved seed introduced by the agricultural college. The work of 1910 is certain to have a very marked effect in increasing the yield. If this increase shall be only two bushels an acre—a conservative estimate—in the near future, it would mean eleven million bushels added to the state's wheat crop, a return of approximately ten million dollars!

GOOD LUCK TO FOWLER.

Have you ever visited Fowler, which is in Meade county, this state? Meade county, you know, is in the bottom tier upon the state's southern boundary line. The county is not noted for anything in particular, but what a fine place Fowler must be! It seems almost impossible to imagine a dead town with a paper in it like *The Gazette*. If ever the inhabitants of a town owed

A Golden Text.

Therefore I say unto you, what things soever ye desire, when ye pray, believe that ye receive them, and ye shall have them.—Mark 11:24

their editor a debt of gratitude and liberal support the people of Fowler owe it to the man at the head of that paper. "An exclusively home paper published in behalf of home interests," the top line reads, and it is exactly that and more. No advertisements are printed upon the front page—glory be—they are kept where they belong, upon the inside.

The subscribers to *The Gazette* get reading matter worth reading. The paper fairly bristles with plans for the town's advancement. You'd suppose the editor owned the place, he's so interested. He has news and farming intelligence and a bit of sport and a whole lot of neighborhood items and a school report upon the first page where it will be seen first.

Moreover, there are editorials—home made, common, garden variety—editorials worth reading in *The Gazette*, and a "clarion call" to the commercial club of the place to bestir itself and make the new year count for more than ever the past years counted. There he is, this editor, standing, with outstretched hands and beaming face, urging the country to watch Fowler—which is in Meade county.

That's the sort of paper to have. Fortunate is the town that has one. And here's a Happy New Year for Fowler and *The Gazette*.

DOING THINGS WORTH WHILE.

I do hope the day is not far distant, says W. E. D. Stokes, in "A Plea for Eugenics," when the entrance requirements of our American colleges will require of their candidates a sound body and sound mind, a good physique, a thorough knowledge of American history and the principles of American government, ability to speak and read at least two foreign languages, and a certain knowledge of engineering, electrical and mechanical research, farming, forestry, chemistry, and of the breeding of horses, cattle, sheep, and poultry, and a general knowledge of such things as are likely to add to the mental and physical improvement of mankind and to the increase of the general wealth of this country.

Such knowledge and information will assist in making the young men of our country healthier, stronger mentally and physically, more progressive, and better fitted to become American citizens. Such knowledge and information will divert the minds of our young men from Wall Street gambling to a more substantial livelihood—to a wholesome, outdoor, progressive life.

Such knowledge will make our young people realize that they are here to

add something to the world's assets, to accomplish something; that a dilatory, idle life is a disgrace and a crime; that work is honorable; that "man shall live by the sweat of his brow."

THAT DRY-CURED HAM.

Even at the risk of encouraging night prowlers, of placing in men's minds suggestions that may mean unrest, it is here set down that he who has not eaten the "Waters' ham" knows nothing about ham. To mention it in the same conversation with the product of packing-houses is a profanation. The Waters' ham makes a diner lean back in blissful contemplation of all the gustatory delights ever described in fairy tales. It drives out thoughts of every-day affairs and makes him to think more kindly of men. While the last shred of it is going its intended way, with a regretful sigh, he resolves to lead a better life in the future. He thinks of suffering millionaires doomed to wag their tired jaws over "ready made" ham in the Waldorf or the Belmont. It is meat so marvelous, so delicately flavored, so palatable, that one longs for the chance to help widows and orphans. The chief regret is, that the every-day world can have none of it. Well did Herbert Grissom, of *The Star*, call it "The Glorification of the Ham."

APOSTLES OF ADVANCEMENT.

Since the establishment of the experiment stations, says Henry Wallace, editor of *Wallace's Farmer*, and more particularly since the establishment of extension departments, farmers are rapidly getting over their prejudice against what they are pleased to call book farming. These apostles of advanced agriculture are directly in touch not merely with the young farmers, but with the older ones, also; and these are beginning to hunger for the practical knowledge that will help them in solving the problems of life.

The agricultural college professors are giving them the life history of insects, showing them how to maintain soil fertility, and especially how to keep the soil in physical condition. The experiment stations are conducting different series of experiments which no one man could undertake.

STOCK, BUT NO BARN.

There is no barn suitable for the housing of the thousands of dollars' worth of valuable live stock belonging to the college. Some of the best animals in the state are forced either to remain out of doors in winter, or to stand in a badly crowded and poorly ventilated stable.

There is not a suitable place on the college farm for the storage of feed, the preservation of silage, or the shelling and grinding of grain. In other words, the physical equipment of the animal husbandry department of the college is not so good as that of many of the private breeders of the state.

The board of regents would spend \$25,000 in 1911-'12 for a barn and equipment. Isn't that a sensible proposition, Mr. Live Stock Breeder?

HEAT WINS AGAIN.

The killing of mill insects by high temperatures just announced by George A. Dean, assistant professor of entomology, has created interest among scientific men and millers in every part of the United States. Heretofore mills have been cleaned with hydrocyanic acid gas, a dangerous thing for any except experienced persons to use. Experts from the college have discovered that by using high temperatures, induced by steam coils or otherwise (118 to 141 degrees F.), a flour mill could be effectually cleaned in about 24 hours. By the hydrocyanic acid gas process it was necessary to shut down the mill for two or three days. This was expensive, especially where a mill was turning out several hundred barrels of flour, daily.

The demand is constant for trained agricultural journalists, not, perhaps, to assume the management of agricultural papers, but to handle a special department which requires both a scientific and practical knowledge of agriculture.—*Wisconsin Alumni, Journalism Number*.

The Anniversary Day.

"I love you, dear—"
No other message half so sweet.
Ambition grows and skies are clear,
The heart is stronger when you say:
"I love you, dear."
"I love you, dear—"
From day to day, and year to year.
The while we go upon our way,
I find new courage in the pledge
"I love you, dear."
"I love you, dear—"
No day is long, if you are near
I shall not falter at defeat
If, in the deepest gloom, I hear:
"I love you, dear."
"I love you, dear—"
I care not if the road be rough;
Discouragement will disappear
If only you are by to say:
"I love you, dear."
—C. D.

SUNFLOWERS.

He has not learned the lesson of life who does not every day surmount a fear.—*Emerson*.

Men weren't made to dream about; they was made t' develop woman's Christian character.—"Just Folks."

Prof. See is an astronomer at the Mare Island, California, navy yard. Things must be looking up out there.

The farmer that used to kick about his road tax is now boosting for "good roads" to the time of his big "six-cylinder."

Someone has willed Speaker Cannon 2½ million dollars. This has absolutely no connection with the Lorimer incident.

Governor Dix, of New York, is said to be a good-roads boomer. At all events he believes in paving his way to the presidency.

In California, newspapers are to be carried in aeroplanes. In this way the latest intelligence may drop into town at any moment.

The *Christian Science Monitor* prints two pages of the latest fashions in women's gowns. The hobble effect seems to be an error.

It's a hot campaign the department of entomology is waging: Dr. Headlee burns the chinch-bugs and Prof. Dean heats the mill insects.

What about this luncheon the Santa Fé railway is to give the Kansas editors January 31 in Topeka? Doesn't the Hepburn law—however, be that as it may.

A good many children are shut up these days in Manhattan. But as they have the chicken-pox they doubtless will break out.—*From the collection of Rameses I*.

A telegram says the Illinois Central is saving thousands of dollars annually by selling its scrap. This does not include the scrap with it's head officials.

Boston sells more wool direct to the consumer than any other city in the world, says the *Christian Science Monitor*. Some expert tariff lawyers in Boston, too, aren't there?

In 1910 the United States mints sent out more than 111½ million dollars in coins, of which 105 million was in gold. It is to be hoped this will encourage the legislature at Topeka.

Six departments were added to the college in 1910: milling industry; highway engineering; forestry; industrial journalism; rural education, and the department of farm management.

No intelligent man doubts the need of agricultural education. How to get larger crops of better products at less cost and still maintain soil fertility, is the first demand of modern agriculture.

Ed. Howe has enough money to produce his own play. Life can hold little else for the Sage of Potato Hill to desire unless, perchance, it is a full house—referring, of course, to the theater.

Can you imagine anything, except, perhaps, a fight in the house or senate, worth five columns in a newspaper these days? *The Pleasanton Enterprise* gave that much space, last week, to "Rev. McProud's" sermon.

Fate has been kind to Courtney Cooper, the reporter in Kansas City whose "Play Without a Name" has won in competition with 187 contestants. In less than a year his salary was increased; he married; his throat was cut and his name used in a "scare head," and now he hits the public a body blow by writing a play. Going up!

LOCAL NOTES.

Otto Low returned Monday from Longmont, Colorado, to resume his college work.

Elmer D. Samson and Mrs. Samson, of Quinter, Kansas, were in town the first part of the week.

Dr. C. M. Brink and Mrs. Brink, entertained the members of the English faculty Thursday night.

Dr. C. M. Brink spoke in chapel exercises Tuesday. His subject was: "Archæology and the Bible."

Mrs. Marian (Jones) Pincomb, '96, of Lenexa, Kansas, has been visiting her father, John Jones, in Manhattan.

George N. Briggs, president of the Manila, P. I., normal school, spoke in the students' assembly one morning last week.

A. E. White, assistant in mathematics, was called to Indiana, last week, on account of the illness of his mother.

William H. Andrews, assistant professor of mathematics, went to Belleville Friday to judge a district high school debate.

James W. Searson, assistant professor of English, was a judge at the district high school debate held at Belleville, Friday.

B. O. Cowan, of Chicago, secretary of the American Shorthorn Breeders' Association, was the speaker at chapel exercises Thursday.

Burton R. Rogers, instructor in veterinary science, attended the seventh annual meeting of the Kansas Veterinarians at Topeka Wednesday. Dr. Rogers spoke.

Miss Gertrude Barnes, the librarian, is taking special pains to keep up the bibliographical indexes so that the latest up-to-date references may be found on any subject.

Pearl M. Schaffer, captain of the Twenty-fifth Infantry, U. S. A., is visiting the college for a few days. Captain Schaffer was Captain Boice's predecessor as commandant of cadets here.

The Webster Society held a spirited debate last Saturday night. Lewis Williams and O. C. Hagans were the contestants. Profs. Johnson, Taylor and Searson were judges. Mr. Williams won.

James W. Searson, associate professor of English, will be a judge of the high school debating contest of the seventh congressional district next Wednesday night. The contest will be held at Belleville, Kansas.

A stag social was given by the Y. M. C. A. for the short-course men Saturday night, January 7. A large crowd attended. Doughnuts and hot coffee were served just before the fellows went home at 10:30 o'clock.

P. C. Hostrup, senator, has proposed a law in the Kansas senate entitled: An act to permit the City of Manhattan to build public school buildings on the public square at Manhattan. The public square means the present athletic park.

The department of music had charge of the exercises in student assembly Wednesday. Certainly everyone enjoys the music of the college orchestra and the glee club. Everyone enjoys the music, not one day in the week but every day, in the student assemblies.

ALUMNI NOTES.

Ikey Miller, '07, spent a day at college lately.

Mrs. Wilma (Cross) Rhodes, '04, was a college visitor when the institute meetings were in session.

W. R. Hildreth, '02, of Altamont, Kansas, is now the vice-president of the Kansas Corn Breeders' Association.

Hiram Conwell, '07, is an instructor in mathematics at the university of New Mexico. He was a tackle on the '07 team.

C. S. Conner, D. V. M., '09, of Mitchell, Kansas, spent a day in Manhattan, last week, renewing college acquaintanceships.

Daisy Harner, '08, spent the holidays with her parents in Manhattan.

H. H. Momyer, '08, is an employee of the telephone company at Miles City, Montana.

Luther W. Waldraven, '00, of Winkler, Kansas, sprained an ankle recently. He spent a few days at the college while recuperating.

L. A. Fitz, in charge of the department of milling industry, renewed acquaintance with H. P. Richards, '02, in Topeka last week.

E. R. Secrest, '02, visited lately at Randolph, Kansas. Mr. Secrest is assistant forester at the Ohio agricultural experiment station.

Marguerite Axtell, '09, and Harold M. Glover were married at the bride's home in Newton. They will be at home after February fifteenth in Topeka.

Miss Louise Fleming, '08, spent last week with college friends. Miss Fleming is now teaching Latin and mathematics in the Mankato, Kansas, high school.

Miss Lura Wharton, of Topeka, and John Calvin, '08, were married, December 31, at Topeka. Mr. Calvin is an assistant in the department of chemistry.

L. G. Haynes, '09, and Miss Grace Enlow, of Wamego, were married, December 6, at Wamego. Mr. Haynes is a forester on the Magdalena national forest reserve in New Mexico.

Mrs. Marian (Jones) Pincomb, '96, and two small sons, of Lenexa, Kansas, have come to Manhattan to spend several weeks with Mrs. Pincomb's parents, Mr. and Mrs. John Jones.

Glen Edgerton, '04, a member of the United States engineer corps, has been ordered to Alaska to serve on a board of road commissioners. Mr. Edgerton has been in Washington, D. C.

D. W. Working, '88, superintendent of agricultural extension in the college of agriculture of West Virginia, is the author of a bulletin published by that college. "Soil Studies" is the title of the bulletin.

T. W. Morse, '95, is the editor of the *Missouri Ruralist*, which is published every week in Kansas City, Missouri. *The Breeders' Special* was recently combined with the *Missouri Ruralist*. Arthur Capper owns the paper.

J. M. Westgate, '97, agronomist in the bureau of plant industry of the United States Department of Agriculture, is the author of a bulletin published recently. The subject of the bulletin is: "The Control of Blowing Soils."

The *Beaver State Herald*, published weekly at Gresham, Oregon, is edited and managed by H. A. Darnall, class of '92. Dean Willard has received one of the special year-end numbers. It is a 24-page edition and contains plenty of local news.

F. W. Christensen, '00, and Mrs. Christensen spent a week in Manhattan visiting Mr. Christensen's sister, Miss Grace. Mr. Christensen is on the way to his new work in the agricultural department of the Agricultural College of New Mexico.

E. F. Nichols, M. S., D. Sc. '88, president of Dartmouth College, was in Manhattan last week. He spent a few hours at the home of his aunt, Mrs. S. M. Fox. President Nichols was returning from the West, where he attended various alumni meetings.

Mr. and Mrs. George F. Freeman are the parents of a baby boy, recently arrived. Mrs. Freeman, formerly Miss Adelle Blachly, was graduated from the Kansas State Agricultural College with the class of 1901. Mr. Freeman was at one time a professor here. He is now a professor in the University of Arizona.

C. P. Hartley, '92, is the author of an excellent practical bulletin on "Corn Cultivation." This is amply illustrated and discusses the subject in a thoroughgoing manner. It is published as *Farmers' Bulletin No. 414*. Mr. Hartley is physiologist in charge of corn investigations in the bureau of plant industry, United States Department of Agriculture.

BITS YOU SHOULD USE.

THE HALF-CHEEK SNAFFLE SO OFTEN SEEN IS AN ABSURDITY.

A Weymouth Bit and Bridoon Is Proper for a Riding Horse—Several Bits for Pullers are not Necessary—Be Gentle.

Know anything about bits? Not the six bits you pay on the diner for boiled eggs, a cup of coffee and a lettuce leaf, but the bits with which you expect to control the actions of your riding or driving horse. A ship without a rudder, a city without laws, a basket-ball team without a schedule—these may be compared with a horse improperly bitted. A badly bitted horse is an unevenly balanced machine, and cannot be expected to give the efficient service that the properly bitted horse can give; besides being inefficient, the horse may be, and generally is, dangerous.

The object of the bit is to give the greatest amount of control with the least chafing. For this purpose the half-cheek snaffle bit, seen on 95 per cent of the horses used on city streets, is about the poorest thing the ingenuity of man has contrived. It has no flexibility, permits of no modification of power, and depends entirely on muscular power for its effectiveness. EVER SEE A BRIDOOIN?

For trying out a new and untried horse a noted horseman recommends the English Liverpool bit for driving, and a Weymouth bit and bridoon for riding. In both of these the mouth-piece is one bar, either straight or with a slight upward curve, known as the "port," in the center. A port, by pressing on the roof of the mouth, materially increases the power of the bit. With the Liverpool bit the reins may be inserted in the cheek, in the bar, or in the lower bar, these bars extending downward on either side, and the lower bar giving a powerful leverage that should be necessary only with an unusually hard-mouthed animal. A curb-chain or strap should be used with this bit, as the action is that of a lever. When the reins are in the cheek the curb-chain does little work. This is the position for the reins if the horse be light mouthed.

PULLERS ARE MADE, NOT BORN.

The Weymouth bit for riding is similar, a pair of reins in the cheek and one in the lower bar being always available. A snaffle-bit generally is sufficient for a light-mouthed riding horse. The general idea that a pulling horse should have a severe bit is incorrect. Pullers are made, not foaled, and a horse that is nearly unmanageable with a severe bit is frequently easily controlled with a mild one. A rubber-covered mouth-piece has remedied many cases of pulling. A thick mouth-piece generally is more effective than a thin one, and more comfortable for the horse. If your horse shows signs of pulling, slacken the tension for a moment; tighten sharply if this fails. A few repetitions should be sufficient. Similarly in a runaway—steady tension on the reins is useless, as it only deadens the feeling in the horse's mouth. Short, sharp pulls should do the business.

Don't put a frosty bit into a horse's mouth unless you have no objection to seeing the barn kicked down. And watch for mouth sores.

IT IS CONSTRUCTIVE RHETORIC.

Students in English Classes Now Are Taught the Actual Use of Words.

The criticism made some time ago by a Kansas editor, that students of English spend too much time in learning rules for correct speaking and writing, and too little time in actually improving their own expression, is almost entirely without foundation. Within the last decade a new term has come into use: "constructive rhetoric," the study of the principles of rhetoric by their actual use in composition. Rarely, nowadays, does a class study the principles of sentence structure, of paragraph structure, or of the forms in discourse, without at the same time applying those principles in actual composition.

"Text-books in English composition and rhetoric have reflected the revolu-

tion in the methods of teaching rhetoric," said Louis H. Beall, assistant in English, yesterday. "A study of the titles of text-books published since 1895 shows the tendency clearly. Before that time such books were entitled simply 'Rhetoric,' or 'Practical Rhetoric,' a misnomer, by the way; since that time they have been called 'Composition-Rhetoric,' 'Composition-Literature,' and so forth.

"In English grammar, too, the change is working itself out; more slowly, to be sure, but the day is coming, I believe, when we shall teach 'constructive grammar' rather than what we may call 'formal grammar,' at least in the grades. There seems to be no good reason why grammar should not be taught in America as it is taught in Denmark, for example, where no formal grammar is taught below the sixth grade, and where all of the grammar taught in the public schools is given in homeopathic doses along with the study of Latin; where the pupils are encouraged to use the mother tongue, and where their attention is called only to such mistakes as they really make, and not to countless mistakes that they will scarcely ever make, or to rules for which they will never have any use."

THE UNEXPECTED CALLER.

Try One of These Menus When It Seems She's Sure to Stay.

Some day some of your neighbors are likely to drop in and spend the day. If you haven't any menus made out, and haven't time to prepare any, try one of these. They may please:

BREAKFAST

Stewed Appricots	Baked Potatoes
Hominy and Cream	Coffee
Bacon and Eggs	Rye Muffins

DINNER

Cream of Lima Bean Soup	Mashed Sweet Potatoes
Fricassee Chicken	Rice Croquettes
Peach Shortcake	Currant Jelly

SUPPER

Cold Sliced Tongue	Graham Rolls
Macarooni and Cheese	Sponge Cake
Raspberry Sauce	Tea

THREE DRILLS A WEEK.

There's a Rookie Squad, Also, to Work Thursdays and Fridays.

The cadet corps will assemble three times a week in the winter term—Tuesday, Wednesday, and Thursday. Company drill will be held Tuesdays if the weather permits. Thursdays, battalion drill will be the order of the day. The men who drill this term for the first time are organized into a "Rookie" squad and will drill in the Armory Thursdays and Fridays, having class work Wednesday.

The cadet corps is divided into four classes for theoretical work: the officers school, the sophomore class, the freshman class, and the recruit class. The drill regulations and the small-arms firing regulations of the United States Army are the text-books used. A larger number will be enrolled this term than was enrolled last term.

WHY EXPENSES ARE HIGH.

Dr. Burton Rogers Figures It All Back to the Tubercular Hog.

One of the addresses delivered in the Minneapolis meeting of the American Association for the Advancement of Science was by Dr. Burton R. Rogers on the "Control and Eradication of Animal Tuberculosis and the Prevention of Tuberculosis in Meat and Milk." It was of particular interest because it let in some light on the increase in the cost of living.

Dr. Rogers said that of the 30,472,921 hogs killed at the packing-houses in 1909 the government inspectors found 836,848 affected with tuberculosis. This number, he said, was 130,802 more tuberculous hogs than were found in 1908, and that during the past ten years 2,648,520 tuberculous hogs and 212,340 tuberculous cattle had been found, which decreased the meat supply and increased the cost of living.

Smile awhile; and while you smile another smiles; and soon there are miles and miles of smiles; and life is worth while because you smile.

HOW TO FARM—BY MAIL.

THE CORRESPONDENCE COURSE WILL CERTAINLY HELP YOU ALONG.

It's the Wise Thing for a Man or Woman Without Time to go to College—The Several Departments Explained—Rules.

Perhaps you can't quit working long enough to take a course in the agricultural college, not even the ten-weeks' short course in the winter. You need information about farming. It is your heart's desire, perhaps, to accumulate enough wisdom so that the hired man or your neighbors—when you drive out from town—won't have you doing something absurd, as cow-boys treated tenderfeet, for instance, in the early days. Why not try the correspondence course of the Kansas State Agricultural College? Any course in which laboratory work is not demanded can be taught and readily learned. If you don't believe it read this letter, one of dozens on file in the office of J. H. Miller, superintendent of agricultural extension at the college:

Oneida, Kansas, January 2. —Director Correspondence Study Department, Manhattan, Kansas.—I have been so well pleased with the practicable information gained in my course in elementary agriculture, and having more time now, I wish to enroll in: Farm Crops I, Stock Feeding I. I have ordered the text-books. Kindly send enrolment blank. J. S. Anderson.

Mr. Anderson is a business man in Oneida. He owns land and he desires to know how to cultivate it. Why shouldn't he study, and why shouldn't you? More than 100 have enrolled this term—110, to be exact—and more are coming in daily. The list includes merchants, clerks in grocery stores, newspaper writers, bankers, ministers, school teachers, boys and girls on farm—unable for one reason or another to attend college—mechanics, men in many branches of trade, and women single and married.

THE COURSES.

It's all very nice to go to college, but if you can't you can't; so here's the list of courses offered this year: Elementary Agriculture, Farm Crops, Soils, Highway Construction, Farm Drainage, Stock Feeding, Fruit Growing, Vegetable Gardening, Landscape Gardening, Economic Entomology, Forestry, Dairy Farming, Poultry, Domestic Science, Elementary Sewing.

And what does it cost for this kind of education? For residents of Kansas, two dollars a course or subject; for non-residents, five dollars. A certificate of completion in any course costs one dollar. The text-books cost from 75 cents to \$1.50. This is the way to enroll: Write for the application blanks, addressing your letter to the director of the correspondence course. After this has been attended to a lesson and a question blank are sent by the college, the student studies the work assigned, fills out the question blank and returns it to the college. The paper is corrected and returned and another assignment sent out. The student is aided with reference books and "helps" from the college so he may have the best chance possible to do good work—and they do it, too. Ten to twenty assignments constitute a course, ordinarily.

THE RULES.

No iron-clad, high-brow requirements for admission are attached to these courses. No schooling is demanded as a prerequisite, but every student must be more than 14 years old. No student may take more than three subjects at a time. One year is allowed to complete a course. The work may be carried on to advantage in groups, but the department advises against it. One book, though, may suffice for two or more students. It isn't wise to try more than two subjects at a time.

College credits are allowed for correspondence course work, provided no laboratory work is required in the subject. The student must take an examination either at the college or at some place chosen by the instructors.

Shirkers are paid what they are worth.

HOW TO REAR A COLT.

A FEW POINTED BITS OF ADVICE
FROM GEORGE C. WHEELER.

Too Much Economy in Feeding in the First
Year May Stunt the Weanling's
Growth and Ruin Him—The
Proper Food to Give.

The present value of the country's horses, G. C. Wheeler says, is greater than the value of all the cereal crops. The farmers of Kansas are urged to give more attention to horses.

"The draft horse is assuredly the farm horse," Prof. Wheeler says. To rear the right kind in the right way the farmer should give especial attention to the colt's feed.

"While the colt, by inheritance, has a natural tendency to become as heavy in bone and muscle as his sire and dam, he can attain that result only by having an abundance of bone- and muscle-forming feed during his growing period. At no time does he make such rapid gains as during his first year. It certainly is a short-sighted policy to restrict his food supply during this period. We think nothing of putting 60 or 70 bushels of corn into a steer to put him on the market at \$80 or \$90, and yet we see well-bred draft foals, which, if properly developed, would bring at the same age twice as much money as the steer, roughing it around the straw stacks and yards, receiving nothing except cheap, rough feed all winter. This effort to economize can result only in disappointment and loss.

HAVE WATER HANDY.

"A bucket of fresh water should be kept accessible to the colt. At the age of a month he usually will begin to nibble a little grain. Crushed or ground oats are most suitable at this time, later using whole oats with a little bran. Alfalfa hay should be in reach at all times, and as the colt grows older he should have all the grain he will clean up. A small yard with a high fence of woven wire is almost necessary, as the colt must have an abundance of exercise. Where two or three colts are run together results are better than where only one is kept. If fed and handled in this way the colt can be weaned when five or six months old with hardly any check in growth.

GIVE IT ALFALFA.

"Through the first winter the weanling should have about all the grain he will clean up. Wherever alfalfa is available, give him the very best and brightest on the place. There is no better muscle- and bone-making feed. He must have some grain. Young drafters cannot be properly developed without it. If stunted or starved during the first year, no amount of good feed and care later will make the animal what he should have been if properly fed as a weanling.

"The second year he should go to pasture. Some grain may be necessary, depending upon the nature and quality of the pasture supplied. His feet should be looked after carefully, as bad faults may develop if they are allowed to go uncared for. The heels should be kept level and the toes short.

THE ORIGIN OF TANTALIZE.

Prof. Beall Gives the First of a Series of
Little Stories of Words.

[The first of a series of items touching the
derivation of certain words.]

Were you ever tantalized? Maybe you were and did not know it. Bill Nye tells the story of two men who started on a fishing trip with a borrowed horse and buggy—borrowed without the knowledge of the owner. Learning that they were being pursued, the two stopped at a convenient corner and procured an appetizing ear of corn, which they held suspended before the horse's nose, and just out of reach, by means of a long fishing pole. The scheme enabled them to escape, but it was tantalizing to the poor horse.

Tantalus, according to a myth of the ancient Greeks, was a mortal son of Zeus who was allowed to live with the gods on Mt. Olympus. On one occasion he was reproved by them for

telling some of their secrets. Angered at their reproof, he killed his own son, Pelops, and attempted to serve him at the table of the gods. The fraud was discovered and Tantalus was sent to Tartarus to atone for his crime. He was submerged to his chin in a lake of pure water, but when he tried to quench his burning thirst the waters receded from his lips. Above his head hung bows of trees, laden with all kinds of luscious fruits, but when he attempted to grasp them the wind carried them out of his reach. To add to his torment a huge rock threatened every moment to fall and crush him. So far as we can learn the word "tantalize" was first used by John Dryden two hundred years ago. It has always conveyed the meaning that it now has. L. H. BEALL.

THESE SHOWED ENGINES.

A List of the Principal Exhibitors in Dean
McCormick's Buildings.

Five companies exhibited heavy machinery in the Engineering building in the recent state institute of farmers. The firms were:

The Rumley Manufacturing Company, La Porte, Indiana; The Hart-Parr Manufacturing Company, Charles City, Iowa; The International Harvester Company, Topeka; Rambler Auto Company, Kansas City, Missouri; The Goodrich Tire Company, Kansas City, Missouri; The Dempster Mill Manufacturing Company, Beatrice, Nebraska.

Approximately 2,000 farmers and their families saw this display. At a time when thoughts of labor-saving machinery are finding lodgment in rural minds this kind of an exhibit was particularly attractive. It was constantly surrounded by interested hundreds. Indeed, the engine show received more attention than anything except the corn.

CITIES MADE TO ORDER.

But It Takes Money, as the Prince Rupert
Story Shows.

"Made to order while you wait," is the trade-mark of the Canadian government in building cities. Think of 220 towns made to order at certain intervals along the Grand Trunk Pacific Railway! This railway, with the Canadian government, is building a trans-continental line through the fertile grain lands of the Western provinces. The Canadian government expects every one of these towns to have a population of from 100 to 1,000 by the middle of 1911.

The largest undertaking by the railroads in this line is the building of Prince Rupert, heretofore called Port Simpson, on the Pacific coast. Prince Rupert is planned to be the commercial center of the new road. Its future is full of promise because of its excellent location. As it has an excellent harbor, Prince Rupert will have a large trade incident to a center where water and land transportation meet. Through Prince Rupert will pass the mail and passengers between Tokio and London, because of the greater rapidity of railroads over steamships.

Prince Rupert will begin its life as a modern city. Big money interests are back of it and its development is rapid. Wide streets, pure water, sanitary sewers and the like are being arranged. These are possible because speculators are to be kept out. The Grand Trunk Pacific has retained the title to the site, and the lots will not be placed on the market until the city is completed. First-class hotels, paved streets and modern freight facilities are to be provided.

Couldn't Stop Them.

Randolph Enterprise: The Y. M. C. A. boys from the agricultural college, Messrs. Nelson, Vaughn, Orr and Hutto, who conducted a series of meetings in the M. E. church last week, gave a practical demonstration of their ability to conquer conditions of weather as well as of mind when they walked to Manhattan Monday. The storm caused the annulment of the train service that day, and as it was assignment day at the college they needed to be there, so they went.

THINGS ABOUT CHICKENS

LET IN THE SUNSHINE AND KEEP THE
COOPS CLEAN.

The Rural World Advises Against Keeping
a Hen Over Two Years Old—Turkey
Hens Are Profitable Until
the Fifth Year.

From The Rural World.

Clean coop windows, let in the sunshine and stimulate the layers.

Remember, the early hatched pullets are those that lay in the winter.

Don't expect eggs if you keep fifty hens in a twenty-five bird poultry house.

Laziness in the fall is often followed by winter sickness among the fowls.

An ounce of common-sense care is worth pounds of curative medicines.

Look out for the small unsuspected drafts—they cause colds and roup.

Geese are grazers and need a pasture. They do not thrive confined.

Water is not imperative in duck raising, but aids breeders in keeping down fat.

Turkey hens are profitable until the fifth year. Change males annually.

In feeding poultry, average a handful to each fowl, and scatter well.

Poultry houses should have double west and north walls, if practicable.

If well fattened, Toulouse geese at three years of age will weigh fifty pounds per pair.

Build droppings boards eighteen inches above ground, and ten inches beneath roosts.

Half-inch mesh wire netting tacked on floor joists will keep out rats.

In most breeds cockerels will crow at or before five months of age.

Keep just enough birds over winter so they will not be overcrowded.

Buy breeding stock before January 1. They are then cheaper than later on.

If several breeds are kept they should be carefully separated all the time.

To be on the safe, profitable side, sell all hens over two years old.

Don't wait until marketing time to begin fattening birds for killing.

To build up a good flock, keep over only the large, strong specimens.

Try keeping thoroughbred—not necessarily fancy—fowls instead of mongrels.

The active singing, scratching hen is the one that furnishes the eggs.

Good results do not result from breeding large, overgrown males to small females.

The breeder for market qualities, instead of fancy plumage alone, makes money.

The best poultry condition powders are good food and plenty of exercise.

A combination of poultry, bees, small fruits and vegetables is profitable.

The Y. M. C. A. Building Debt.

J. C. Ewing, treasurer of the Y. M. C. A. building fund, announces the following payments on the building debt in November:

Yates Center Farmers' Institute.....	\$ 3 00
J. R. Harp, Great Bend.....	10 00
W. H. Mayback, Great Bend.....	1 00
Wm. Osmond, Great Bend.....	5 00
J. T. Ralston, Lyons.....	2 00
Dr. Bohrer, Lyons.....	50
J. T. Skinner, Lawrence.....	15 00
Ottawa Farmers' Institute.....	13 00
C. H. White, Burlington.....	5 00
Garnett Farmers' Institute.....	25
C. L. Becker, Ottawa.....	5 00
J. E. Baker, Ottawa.....	1 00
J. T. Willard.....	25 00
C. W. Gilmore.....	2 50
Arthur Capper.....	100 00
Raymond Ferris.....	2 00
R. A. Mitchell.....	16 00
Alfred Erickson.....	1 50
Paul C. Hoover.....	5 00
F. G. Kimball.....	2 50
Jesse Gantz.....	2 50
C. J. Stratton.....	5 00
Clyde J. Ege.....	2 00
Alfred S. Porter.....	5 00
	\$229.75
Previously received.....	\$29,543.50
Total received to December 1st.....	\$29,773.25
Balance of debt on building.....	\$6,200

HOLD YOUR SIDES, NOW.

The Y. M. C. A. Minstrels Are Preparing an
Entertainment for February 13.

Get ready for the black-face men. The Y. M. C. A. will give a minstrel show, February 13, in the college Auditorium. The songs will be selected from a collection of about sixty of the "latest popular songs." G. A. Westphalinger is arranging the music. The orchestra will consist of at least forty pieces. The proceeds will go toward raising the debt of the Y. M. C. A.

Kansas State Agricultural College

College of Agriculture and Mechanic Arts

COURSES OF STUDY

As organized at present, the Kansas State Agricultural College offers 39 definite courses of study. These are

Agricultural Group: Four-year courses in agronomy, in animal husbandry, in dairying, in horticulture, and in veterinary science. A two-year course in agriculture, two-year short winter courses in agriculture and in dairying. A one-year short winter course in dairy manufacture, a short course in testing dairy products, and a six-week summer course for teachers.

Mechanic Arts Group: Four-year courses in mechanical engineering, in electrical engineering, in civil engineering, in architecture, and in printing. One-year courses in foundry work and pattern making, in blacksmithing, in drafting and machine shop practice, and in boiler and engine operation. A summer course in manual training for teachers.

Home Economics: A four-year course in home economics, a six-month course in housekeeping, and a twenty-week course for teachers.

General Science: Fifteen different organized four-year courses in pure and applied science in mathematical, physical, biological, educational and economical lines.

ENTRANCE REQUIREMENTS

The College reaches down to the common school. It takes students as soon as they have completed the common-school course. Young people who enter the College with a common-school diploma, or who are able to take an examination in the subjects required for such diploma, may enter the sub-freshman class.

Students who have had two years' work in any accredited high school will be able to enter the Agricultural College in the freshman year of any of the courses, and will there receive not only instruction in the academic branches named, but will receive the laboratory drill in corn judging, stock judging, shop work, cooking, sewing, etc.

For catalogue or any information address

President H. J. Waters,

Manhattan, Kansas.

PROFIT IN HIS GARDEN.

A. F. WHEELER FED THE FAMILY
AND MADE \$125, ALSO.

Here's a Bit of Back-Yard Agriculture in
Dodge City that Should Encourage
Kansas Corn and Wheat Bar-
ons to Grow Vegetables.

A man should support his family from his own back-yard garden. If he makes a few dollars additional his record is worth noticing. One of the strong supporters of this kind of agriculture is J. H. Miller, superintendent of agriculture extension in the Kansas State Agricultural College. Mr. Miller has done much to encourage back-yard gardens in the small towns, and to turn the thoughts of the farmers to vegetable growing—and that's about the last thing the farmers think of, should any inquiry be made on the point.

ON A LOT 110 X 120.

A. F. Wheeler, of Dodge City, has reported to Superintendent Miller that upon a lot 110 x 120 feet he grew enough vegetables, last summer, not only to feed his family but to give him also a profit of \$125.30. Mr. Wheeler says his garden thrived because he gave especial attention to the conservation of moisture. Here, in his own language, is his report:

"I plowed my ground November 26, 1909, going six or eight inches deep. I then went over it several times with the harrow. I gave it another harrowing January 20, 1910, and February 9 planked and firmed the top in good shape. I sowed my first seed the first and second days of March. From then on I worked the ground with the hand cultivator every minute I could give to it. As soon after a rain as the ground was dry enough to work I cultivated to save the moisture, for the keeping of all the moisture in the ground is the great problem in western Kansas.

"This report gives only the amount of vegetables sold. It does not take

into consideration any that we used for our table. I did not keep the dates of the sales from my late garden which I sold in November and December, but only the amounts. I figure that the vegetables we used would just about pay for all work done. The total amount paid for plowing and harrowing and for seed was \$16.75. The receipts were \$142.15, leaving a profit of \$125.30. I did not use fertilizer of any kind this year, but have had a lot of manure spread over the ground for another year."

The total sales for the vegetables grown were:

Radishes.....	\$ 27 95
Onions.....	39 00
Peas.....	29 05
Beans.....	9 35
Beets.....	14 75
Lettuce.....	5 70
Cabbage.....	2 25
Cucumbers.....	1 75

November and December sales.....

\$129 70

\$142 15

FIVE GOSPEL TEAMS.

Y. M. C. A. Boys Gave Up Their Holidays for
the Work.

Five gospel teams from the Y. M. C. A. left Manhattan late last month for Randolph, Waterville, Irving, Haddam, Hollenberg, and other towns. The teams held meetings every afternoon and night during the week, including Sunday night. The boys were not preachers and they did not intend to preach, but they told their convictions about the Christian religion. They gave up their Christmas vacation without pay and took up collections only enough to pay their car fare.

The members of the gospel teams were: On the Randolph team: Vaughn, Orr, Hutto, Nelson, and Heald. On the Waterville team: Collins, Hubble, Keetch, and Taylor. On the Irving team: Jaccard, Holland, Hughes, and Lamont. On the Haddam team: Fuller, Mitchell, Levine, and Turner. On the Hollenberg team: Menizer, Wiltzie, and Marshall.

There is little efficiency in a complaining man.

THE KANSAS INDUSTRIALIST

Volume 37

Kansas State Agricultural College, Manhattan, Saturday, January 21, 1911

Number 16

THE WATERS DRY CURE

HOW TO KEEP CHILDREN ON THE FARMS IS HERE REVEALED.

No Boy Would Leave a Home Where Hog Killin' Time Was Regular and Ham Like This Was Served—The Process Described.

Here is the "Dry Cure" used by President Waters and his man, Perry, in making the ham that lingers in the memory of all who eat it:

To 1,000 pounds of meat take the following:
40 pounds common salt.
10 pounds New Orleans sugar.
4 pounds black pepper.
1½ pounds saltpetre.
½ pound cayenne pepper.

Weigh the meat, and take such part of the ingredients as that is a part of the 1,000. Let the meat cool thoroughly. After thoroughly mixing the ingredients, one-half of the amount should be rubbed well into the meat. Put the meat in a dry, cool place (never in a cellar). Let it remain two weeks, then rub on the remainder of the cure, and let it lie about six weeks, when it is ready to hang.

It is important that the meat be well rubbed each time the cure is applied, and that plenty of the cure be forced in the hock end and around the joints. Less cure should be used on the thin sides than on the joints. The heavier and fatter the meat, the longer the time required for curing. The warmer the weather, the quicker the meat will take the cure. These arrangements are estimated on the basis of about 200- or 225-pound hogs and ordinary January and February and March weather.

While in general a light straw color would indicate sufficient smoking, it is always safe to try a piece of thin bacon or shoulder, to be certain that the process has been carried far enough to give proper flavor and cure. The hams may be kept one, two or three years without detriment, and will improve in flavor up to the end of at least two years. No deterioration will take place for even five years if a ham is properly cured.

Smoking should be done slowly. It should occupy four to six weeks, a little every day, and with little heat. Slow smoking gives a delicate flavor. After the smoking is finished wrap each piece in paper, put in an unwashed flour sack and hang in a dry place.

The brine cure requires the same materials, minus the pepper. When the meat has cooled rub it with salt and let it drain over night. Pack in a clean barrel with the heavy pieces, hams and shoulders, at the bottom. For every 100 pounds use 8 pounds of salt, 2 pounds brown sugar, and 2 ounces saltpetre. Dissolve in four gallons of water and cover the meat with it. Thin sides should remain in this four to six weeks and hams six to eight weeks. After it has dried thoroughly smoke as in the dry cure.

PUTTING FAT ON COWS.

An Interesting Interview in Kansas City With a Manhattan Cattle Breeder.

From *The Drovers' Telegram*.

G. I. Moyer, of Manhattan, finds that cows will put on fat faster under similar circumstances than steers, and in that way pay out just a little better as a feeding proposition. Mr. Moyer had on the market two car-loads of cows, yesterday, of his own feeding that made a fine feeding record. These cows had been on a ration of ground corn and alfalfa for 60 days, and in that time they made a gain of 200 pounds to the head. This was a little better than 3 pounds a day. They weighed 1,164 pounds and brought \$4.90, making the sale by the head a little more than \$57. That is a good price for cows. "These cows showed up well on so short a feed,"

said Mr. Moyer. "I think as a rule cows will do just a little better when it comes to putting on fat than steers. They seem to show a gain quicker than steers, and then they feed well all the way through. I fed them on ground corn and alfalfa, which I consider the very best fat producer that can be had. Cows are good sellers, too. No matter what the market seems to be, a shipment of fat cows will not hang fire long on the market. We have days occasionally when steers are very slow sellers, but I have never known a time when cows were not in demand, and most of the time at high prices. I am feeding now a string of steers in just about the same way I handled the cows. The weather

DEATH TO MILL INSECTS

HIGH TEMPERATURES, PROF. DEAN SAYS, WILL DO THE WORK.

The Assistant Entomologist Has a Method Better and Safer Than Hydrocyanic Acid Gas—Not a Bug Remains—No Shut-Down Required.

Now it's the mill insects that are to be heated out of house and home. The trouble has been that these little pests have insisted upon setting up house-keeping right in the best flour mills in the country—in the flour—and ruining everything they touch. A while ago the entomologists of the Kansas State Agricultural College were advising

an flour moth. It required 118 degrees to kill the larvæ and pupæ. A temperature of 118 degrees killed the adults of the rice weevil and 119 degrees proved fatal to all stages of the saw-toothed grain beetle. At 120 degrees the majority of the cadelle perished, but it required 120 degrees for three minutes to kill all.

UP TO 141 DEGREES.

Experiments proved the insects could be destroyed at a temperature not beyond that which could actually be produced within a modern mill. A flour mill was selected for a test. This mill had heavy brick walls and tight wooden floors. It had a daily capacity of 600 barrels. Its construction represented the average modern mill in Kansas. It was heated with steam coils. The heat was applied from 6 a. m. to 6 a. m. the day following. The average temperature in the mill at the time the heat was applied was about 90 degrees, and the mean temperature during the day outside the mill was 77 degrees. The highest temperature reached in the mill was 141 degrees. A careful examination of all parts of the mill, even the deepest accumulations in the most inaccessible parts, failed to show live insects. In several places where there were accumulations inaccessible to hydrocyanic acid gas, not an insect lived. Thousands perished. To fumigate with hydrocyanic acid gas requires from two to three days, and this long shut-down, with the additional cost of material, is expensive and dangerous. You can turn on the heat Sunday morning until Monday morning, kill all the bugs, and resume business on time.

CARE FOR KANSAS HISTORY?

Raymond G. Taylor is to Have a Class for Juniors and Seniors.

Would you like to know something about Kansas history? If so, here is a chance. Raymond G. Taylor, instructor in history and civics, is organizing a special class in Kansas history. No college credit will be given for the work and there will be no charge for the instruction. Mr. Taylor desires to get a class together to study the history of this state. The size of the class will depend on the material that is available.

All juniors and seniors who wish to take up this work should call at Prof. Taylor's office, A 65.

A Talk of Panama.

Glen Edgerton, '04, lieutenant U. S. N., spoke in student assembly Tuesday. He told of the numerous prin-

Thirty Thousand in 30 Years!

Since 1879 approximately 30,000 students have been enrolled in the Kansas State Agricultural College. Allow for the years when only a few hundred students came, and think what those educated boys and girls meant to the state. Worth thinking about, isn't it?

flour mill, and believing that the death of these insects in the Kansas mills was caused by a maximum temperature, the next step was to determine this temperature and to ascertain whether it would be possible and practicable not only to produce such a condition in a modern mill, but whether it would prove fatal to the insects.

Experiments proved that 119 to 120 degrees temperature killed the insects. The investigators made similar experiments with the larvæ, pupæ, and adults of the saw-toothed grain beetle, the Mediterranean flour moth, the cadelle, and the adults of the rice weevil. As soon as a temperature of 116 degrees was reached it proved fatal to the adults of the Mediterranean

palities near the Panama Canal and of the character of the laborers employed by the United States government in Panama. Mr. Edgerton is on the way to Alaska, where he will be engaged in government engineering. He is a member of the Army Engineers Corps.

For Larger Yields.

The Council of North American Grain Exchanges has a special committee on seed improvement, with a secretary who is trying to obtain the cooperation of agricultural colleges and all organizations interested in the subject. The committee is to meet in Chicago February 8 to discuss the subject, "How to Obtain a Larger Yield of Better Grain."

KEEPING A DAIRY BOOK?

IT'S THE ONLY WAY TO DETECT THE LOAFERS IN THE HERD.

One Cow in Three, It is Believed, is Kept at a Loss—The Story of One Cow Family That Changed.

One cow of every three in Kansas is unprofitable—approximately. The average cow is kept at a loss; she is a "star boarder." A disregard of proper breeding and a lack of systematized records is responsible for this. The average cow produces about 130 pounds of butter a year. Figuring the cost of feed at market price, the cost of keeping a cow for a year is \$35 or \$40. Suppose twenty-five cents a pound for butter is the price the year around; the income from the average cow would be about \$32.50.

Breeding is the remedy for this low average. A common average herd can be graded up successfully until it nets the owner a good profit every year. The man who finds that his cows are unprofitable is at once disposed to sell his herd and buy a good one. That is out of the question. "Dairy cows," O. E. Reed, assistant professor of dairying, says, "command higher prices than any other cattle on the market to-day. The owners of good dairy cows are not eager to barter away a source of so much profit."

HERE'S A TYPICAL CASE.

Here are some figures that speak for themselves. They were obtained from a western Kansas farmer. A western grade cow produced in one year 3,085 pounds of milk (137 pounds of butter), making a total income of \$34.19. The heifer from this cow by a scrub shorthorn bull produced 3,700 pounds of milk (155 pounds of butter), making a total income of \$38.80. The heifer from this same cow by a pure-bred Jersey bull produced 6,000 pounds of milk (280 pounds of butter), making a total income of \$70. In other words, the offspring of that grade cow produced 2,915 pounds more milk (143 pounds more butter) than its dam. The increase in income was \$35.81.

These figures prove that breeding will make the average herd profitable to the farmer who uses good judgment in the selection of a sire. But the sire should be one whose ancestors were high producers. Constant breeding will steadily increase the value of the herd. When a pure-bred sire is used, the first offspring will be one-half pure bred, the next three-fourths, and so on. The sixth generation will be ¾ pure bred, and that is good enough for dairy purposes.

KEEPING A RECORD.

The matter of keeping records is important. The farmer should be able to take account of stock at the beginning of every year, the same as any merchant does. Many men complain of the time and trouble that go with the weighing and testing of milk. Even if the dairyman does not weigh the milk every day, he can at least keep records for two or three days every month. From these records he can compute the record for the month. Then, at the end of the year he can tell just which cows are good investments and which are visitors.

RODELL TO HEAD ATHLETICS.

The Post of General Manager Goes to the Assistant in Printing.

Earl N. Rodell, assistant in printing, has been elected general manager of the K. S. A. C. Athletic Association. J. O. Hamilton was recently elected to the place, but resigned because he had no time to spare from his regular work. Mr. Rodell is a hustler and is pretty certain to make an excellent record.

How It Touches You.

Nearly 2,200 boys and girls in the Agricultural College, Mr. Lawmaker, are learning to be modern farmers and valuable homemakers. That's the work of a term. This influence is bound to touch you somewhere, isn't it?

all fall and winter has been ideal for feeding, and in fact stock of all kinds is doing well."

ANY MONEY IN HOGS?

A Few Cheering Words From Indiana That Should Convince You.

From *The American Swineherd*.

J. A. De Witt, a farmer near Paoli, Indiana, bought a sow and nine pigs for \$22.50 about a year ago. From this litter, and the succeeding ones from this sow, he has sold hogs which brought him \$119 in the first lot, and since then \$87.50 more. He still has the sow and enough shoats to bring him \$70 or \$80 if placed on the market; over \$275 in all from the original investment of \$22.50 in so short a time. On a pork basis, this ought to be a pretty good hint.

An Evangelistic Supper.

The Y. M. C. A. will open its evangelistic campaign with an oyster supper Tuesday night, January 24. "Dad" Elliott, the leader of the campaign, has just completed a similar series of meetings in the Pennsylvania State College where, with an enrollment of 1,600 men, the average attendance was 1,200.

A Military Ball.

The cadet corps will give a military ball, January 27. Captain Boice says that so many of the boys are eager to go that two dances may be given, so that all may go. The ball will be given in the Commercial Club rooms.

As to Bridge Laws.

"Suggested changes in Bridge Laws" was the subject of a talk by W. S. Gearhart, highway engineer, before the Kansas Engineering Society, which met yesterday at Topeka. Mr. Gearhart is secretary of the society.

No More Indolence.

The day when indolence can no longer inherit the earth is at hand; when the skilled brain must guide, and the skilled hand apply the lesson of prudence. The farming of the future must be conducted from a profit, and not alone from a production basis.—*Farm News*.

The Record Foundry Run.

The foundry made a 4,800-pound run, Tuesday. This is 400 pounds greater than has ever been run at one time.

Responsibilities gravitate to the person who can shoulder them.—*Fra Ebertus*.

THE KANSAS INDUSTRIALIST

Issued weekly during the college year by the Kansas State Agricultural College, Manhattan, Kansas.

PRES. H. J. WATERS Editor-in-chief
 PROF. C. J. DILLON Managing Editor
 DR. J. D. WALTERS Local Editor

Except for contributions from officers of the college or members of the faculty, the articles in THE KANSAS INDUSTRIALIST are written by students in the department of industrial journalism, under the direction of Prof. Charles Dillon.

The typesetting and other mechanical work is by students in the school of printing, of which J. D. Rickman is superintendent. Both these departments are in Kedzie Hall.

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SATURDAY, JANUARY 21, 1911.

SUPPORT YOUR INSTITUTE.

Much is being printed just now in favor of farmers' clubs to relieve the alleged loneliness of rural life. Clubs are to be encouraged where needed, but why should they be undertaken in Kansas where every county—and there are 105—has from one to six farmers' institutes? What is an institute if it isn't a club, and the best kind of a club, too, that could possibly be devised? Why should no the members of these institutes meet more frequently, in town or at a country school or church, and there have a feed—which seems to be the first requirement with most men—that shall satisfy the keenest appetite of even the hungriest ruralist. Banquets, they like to call them, and let them do it.

There is such a thing as overdoing the club business in the country as it was overdone in town. About all a farmer needs is a good, live institute in his community. The disposition to support it properly by attending its meetings, paying his dues, and profiting by the discussions and the annual contests. Beyond this line farmers need not go, except to have a beef club, perhaps, or some other form of coöperation in meat killing and curing. And even this department of farm life can be safely handled in the institute. One meeting well attended is worth twenty with only ten or twelve chairs occupied.

What all the farmers need drilled into them is a little more of the spirit of coöperation—indeed, they need a whole lot of it. As a class, the farmers of 1911 are not so eager as they were in 1865, for instance, to give one another a friendly lift. Silo parties should be popular in every county—parties at which everyone turns to and helps to fill some one's silo. There should be a revival of old hog-killing days and attention to meat curing, so that the farmers shall cease to produce the meat, sell it to the packers, and then buy it back at an exorbitant advance. This situation, described recently by President Waters, is as ridiculous as anything possibly could be.

The value of the Grange or the club is not to be underrated. The point at issue here is that the institute can fill a large place in rural life if earnestly managed. It induces better farming, better live stock, and altogether better farm life.

THE USES OF LITERATURE.

The best means of culture is, and always has been, travel; but travel is beyond the means of many, and it takes too much time. The best substitutes that have yet been found for travel are reading and social intercourse with those who have had the advantages of education, travel, and reading. But this social intercourse, like travel, is for various reasons beyond the reach of many. They must fall back, then, upon reading.

Literature furnishes an invaluable fund of information to the busy man whose time and energy are so occupied that he has no inclination, even when he has the leisure, to apply himself seriously to the acquiring of information, except along his particular line.

This is an age of high specialization. The man who does not specialize does not rise very high. In the scramble for position it is the man who knows

all about some one thing that is given the supreme chance to do that one thing. The educational ideal of the day is to know one thing better than anyone else knows it, whether it be to plan a skyscraper or to cut a garment, to design an engine or to train the growing child.

But no one can be satisfied to know that one thing and nothing more. A man who aims never, under any circumstances, to know more than one thing may succeed in knowing that one thing well, but he will make an impossible husband, a most unpleasant neighbor, a most useless citizen, a crank after all.

In the days of Francis Bacon a man might hope to know the most of what there was to be known about literature, art, science, history, and so on. The ideal of education was to know everything about everything, and Bacon himself came near realizing that ideal. A century or two later the ideal of education might well have been expressed: to know a good deal about everything. Nowadays it is to know everything about something, and as much about everything else that is worth knowing as there is time for. This sort of education makes the really useful citizen of the twentieth century, when men are measured, not by what they know, but what they can do with what they know. It is the mission of literature, in a broad sense of that term, to supply this which may be called the "supplementary" information.

Literature serves also for recreation. It is said that even a pair of shoes must have rest if the highest degree of efficiency is to be realized. No man can do his best if he works at top speed all the time. It is by sending the passenger engine to the round-house every day that the longest possible life is assured for it. So with the man of the twentieth century. He must have rest, a change from his regular work. Some form of physical exercise is best for many; but to get this is not always possible. Often it is not what is needed. Here again literature may play an important part. A man may read for relief from the nervous tension of the daily struggle to make a living and rise above the other fellow.

Some persons declare that men have not the time nowadays to read for culture, and for information, and for recreation. If they select well what they read, they may read for all three at one time. In the reading of history, biography, travel, essays, both humorous and serious, poetry, and the novel, to say nothing of the wealth of good magazine literature within the easy reach of all, men may find culture, information, relief from "carking care," and, best of all, inspiration to work on for the good of mankind.

L. H. B.

WHY "GENERAL REPAIRS"?

Perhaps you don't understand that item, "General Repairs," mentioned in the regents' requests upon the legislature. If you examined some of the old buildings, notably Anderson Hall, and were to see the worn floors and leaking roof and broken doors, you would understand why the regents believe in spending something if they are to avoid a greater expenditure.

Every good business man puts something aside for repairs and depreciation. State institutions rarely have a chance to do it. For many years no special fund has been provided for the repair of the property of the college. As a result, the buildings are not in good repair. The roofs of several need to be replaced; in one instance the entire end of a building will need to be reconstructed; floors in other buildings are worn out.

The state architect, at the request of the authorities of the college, went carefully over the institution and estimated in detail the repairs required, and the amounts requested by the board of regents for this purpose are those recommended by him. The board needs \$15,000 in 1911-'12 and \$20,000 in 1912-'13.

THE MILLING INDUSTRY.

Kansas is the principal hard winter wheat state of the union. Only forty per cent of the wheat grown in Kansas

is milled in the state. Every bushel of wheat grown here ought to be milled within the state, to help build up the state's industries and to keep the by-products of bran and shipstuff at home, to be fed to improved live stock and the fertility be thereby returned to the soil instead of being lost to the state.

The college is seeking, through this department, to increase the quality of the Kansas flour, by more scientific blending of the wheats; through instruction as to the handling of the wheat, from harvest until the time it is

A Golden Text.

Lead me, O Lord, in thy righteousness because of mine enemies; make thy way straight before my face.—Psalm 5:8.

milled; by baking and chemical tests, to show how the wheats may be used to produce the largest yield of flour of the highest quality.

The board of regents has asked for \$2,000 for this department in 1911-'12 and \$2,000 in 1912-'13. Isn't it worth it?

MORE ROOM NEEDED.

One of the smallest buildings on the campus is the agricultural building. This is because it was one of the first to be erected. It was built when the enrolment was between 400 and 500, instead of approximately 2,400, as at present. The animal husbandry department, soils, and the crops department, have entirely outgrown this structure.

It is recommended that a new building for these departments be provided, to contain a live-stock judging pavilion, a laboratory for instruction in cutting and curing meats, a corn and small-grain judging pavilion, and class rooms for animal husbandry, soils, and crops. The present agricultural building is needed by other departments, which have also outgrown their quarters.

An agricultural hall can be built and equipped for \$50,000 in 1911-'12 and \$75,000 in 1912-'13. The regents have asked for that much money. They ought to have it. It won't take thirty minutes to convince any visitor of that. Come over and see for yourself.

HEAT AND POWER EQUIPMENT.

The economical heating and lighting of a plant like the Kansas State Agricultural College is no small undertaking. With two large buildings added, viz., the mechanical engineering building and the new armory and gymnasium, it is necessary to increase the equipment and to revise in an important way the lighting and heating systems. For this purpose the board estimates \$7,500 in 1911-'12 and \$7,500 in 1912-'13.

FLOWERS IN THE YARD.

A Few Suggestions from a Student Who is Interested in Beauty.

"Beauty is simplicity." This maxim carried out in the selection and arrangement of flowers for the front yard will give the most satisfactory results. It is remarkable what an improvement a few flowers in the front yard will make in any lawn. Especially is this improvement noted in a farmer's front yard.

One must use one's own taste in selecting shrubs or the smaller flowers for the yard. But to make a success of growing any kind of flowers one must take into consideration the soil and the amount of sunlight they will receive. Did you ever notice how attractive a few climbing roses make a porch appear in summer? The hardiest and most beautiful climber is the "crimson Rambler," although there are numerous other climbing flowers that are most attractive.

In placing flower beds in a lawn it is best to have a simple group of regular beds and figures of various sizes, neatly cut out and placed near center of the lawn. In this way the flowers form a strong contrast to the green turf surrounding them. Separate beds can be planted with a collection of flowers, such as German asters, petunias, pur-

ple globe-amaranths, and mignonette. Or beds by themselves can be filled with foreign flowers, or flowering shrubs, as: heliotropes, lantanas, geraniums, fuchsias, verbenas, etc.

No yard is complete without several rose-bushes. Innumerable varieties are advertised. The most popular of the rose family probably are the "General Jack" and the Japanese Tea Rose. In selecting flowers for the yard use common sense. Don't be carried away by the brilliant advertising in seed catalogues. Choose flowers that are attractive, yet those that do not require 'hothouse handling. Then when your flowers bloom you will realize that "Flowers are the expression of God's love to man."

WHAT THE COLLEGE DOES.

One of Many Student Contributions Discussing the Institution's Work.

The students in industrial journalism were assigned, recently, to write something showing why the agricultural college is entitled to liberal support. Here is one of the contributions:

By determining the best method of caring for growing alfalfa, the Kansas State Agricultural College has increased the yield of that one farm crop sufficient to pay the expenses every year of all the state educational institutions. The same is true of the increased yield of corn and wheat. That proves the economy of supporting the college liberally.

The corn belt of Kansas extends one hundred miles farther west than it did a few years ago. If the effort to breed a drouth-resisting corn is successful, the western edge of Kansas may mark the boundary of the corn-producing area in Kansas. In such an event, the agricultural college will have earned an everlasting legacy.

Every dollar received from the United States government and the State of Kansas will be returned to the commonwealth with interest. And the more liberal each is, the quicker will Kansas utilize its entire soil area efficiently. If the profits made for Kansas returned directly to the college, the legislature's biennial appropriation would compare with the amount as a drop to the bucketful.

The college is making agricultural Kansas. It is regretful that every two years the legislature must be begged to invest in its activities when several hundred per cent interest is guaranteed.

WHY NOT?

A Hall of Fame in the Agricultural College is Suggested.

From The Kansas Farmer.

The University of Illinois maintains, in its agricultural college, a Hall of Fame to commemorate the names of men who have become noted in the agriculture and live-stock industries. McCormick, the inventor of the reaper, has a place in this hall, and other noted sons of Illinois have been and will be given suitable recognition there.

The action of the committee on the Col. W. A. Harris memorial in selecting the agricultural college grounds at Manhattan as a suitable site for the proposed monument to their famous Kansan suggests the idea that the Kansas college establish a Hall of Fame for this state. Kansas can supply an abundance of material for such a hall. It is doubtful if any state in the corn belt has enrolled on its list of citizens a larger number of men who have solved real agricultural problems; who have done more to advance human knowledge along agricultural lines; who have extended the boundaries of agricultural empire, and who have more justly earned such recognition at the hands of their fellows and of the generations which follow them and profit by their work, than has Kansas.

It is to be hoped that this committee and the college authorities will adopt the idea and arrange to place mementos of other great Kansan farmers beside that of Col. W. A. Harris, one of the greatest of them all.

The busy man's creed: I believe in the stuff I am handing out, in the firm I am working for, and in my ability to get results.—Fra Elbertus.

My Philosophy.

I allus argy that a man Who does about the best he can, Is plenty good enough to suit This lower mundane institute— No matter of his daily walk Is subject for his neighbor's talk. And critic-minds of ev'ry whim Jest all git up and go for him!

It's natchural enough, I guess, When some gits more and some gits less. For them-uns on the slimmest side To claim it ain't a fair divide; And I've knowed some to lay and wait. To git up soon, and set up late. And ketch some feller they could hate Fer goin' at a faster gait.

My doctern is to lay aside Contensions, and be satisfied; Jest do your best, and praise er blame That follers that, counts jest the same. I've allus noticed grate success Is mixed with troubles, more er less, And it's the man who does the best That gits more kicks than all the rest.

—James Whitcomb Riley.

SUNFLOWERS.

The new president of Portugal seems to Braga lot about what he intends to do.

When you play, says Theodore Roosevelt, play hard; when you work, don't play at all.

The Schenk case will be reversed in the supreme court of West Virginia. Judge Jordan has ruled that "all the facts must go to the jury." The idea!

Happiness is the only good. The place to be happy is here, said Ingersoll. The time to be happy is now. The way to be happy is to help make others happy.

Don't be a sorehead; don't be a misanthrope, if you know what that is. The weather records show an alarmingly large number of cloudy days. Don't add to the gloom.

"It's easy enough to be pleasant," said the late Ben King (?), "when life flows on like a song; but the man's worth while who still can smile when everything goes dead wrong."

The attention of Kansas City, Missouri, is directed, for a moment, to Bradford, England, where a company has gained permission to operate a trackless trolley. Are these the Baltimore Avenue people gone abroad?

"Seems as if fate wuz agin' us farmers," said old Bill Silage. "Use to be we couldn't use the horses Sunday 'cus they needed rest. Now we can't use the auty-mo-beel 'cus the weather's too cold."

Every man's memory should be arranged so that, at will, he might efface any recollection of the mean persons he meets. The poet who wrote "Just to Forget, Lord, Just to Forget" knew a thing or two.

A law against treating in saloons has been enacted in Tacoma, Wash. Now if the city will have another against the saloons and enforce both laws Tacoma's conduct in the census will be overlooked.

No advice issuing from colleges is more important than this: Keep books. Have a record of every animal and its conduct, and of every field. Incidentally, a record of your own actions may prove valuable.

Now the Emporia Gazette and the Topeka Journal are in an argument to prove the meaning of pains in the back. Why not a few words about corn and fertilizers and such things? Men worry too much about their insides, anyway.

Deacon Walker and Comrade Balloskey have been written up in the Empory Gazette! This is getting mighty close to heaven. Only to have a cigar named for them—The Two Orphans, or the Cinder Beetle—remains to be desired.

Something very suspicious about that man in Hutchinson who has started a "movement" to abolish meetings at night because they keep men away from their wives. He's either what the Sylvia girls would call a "tightwad" or he has only recently married. Anyway, the man isn't normal.

Did you ever try lying in bed all day when nothing much was the matter except that things weren't going right and you felt like kicking a hole through the side of the house? It's a great cure—if your wife can stand it. The chances are that she needs the same treatment. Every one should lock himself in once in a while, shut the world out, and have a long, long think.

LOCAL NOTES.

E. H. Webster, dean of the department of agriculture, was in Topeka Tuesday.

The chemistry department has received another large shipment of glass from Germany.

E. P. Johnston, instructor in public speaking, is ill at his home at 608 Blumont Avenue.

H. B. Walker, drainage engineer, attended the meeting of the Kansas Engineering Society at Topeka.

Miss Cleora Pierce, of Springfield, Massachusetts, is expected this week for a visit with her sister, Mrs. H. E. Porter.

On account of the illness of the pastor, Dr. Brink occupied the pulpit of the Presbyterian Church of this city last Sunday.

Walter Buck, implement salesman with the Weisindanger Implement Company, adjusted some farm machines for the college this week.

At the request of the Y. W. C. A. the class in Old Testament poetry will be continued the winter term. The class is taught by Prof. Searson.

The International Harvester Company has presented to the mechanical engineering department a gasoline tractor; also a stationary gasoline engine.

Fred Slaght is attending the University of Illinois this year. He was formerly a student here. His address is 501 East Clark Street, Champaign, Illinois.

S. R. Davis, representative from Clay county, was here last week for a few days' visit with his son, J. A. Davis, a student in the Kansas State Agricultural College.

The students of business organization, a course taught by J. E. Kammer, professor of economics, have been assigned to study the organization of several of the Manhattan business firms.

The Varsity Shop has moved from Moro Street to the north wing of the Coöp. building. Elmer Kittell is the owner. The show windows are well fitted for decorating. The interior of the store is tastefully arranged.

The veterinary department has a magazine library. One large room on the main floor of the veterinary building is devoted to that purpose. Here the students may read *The Kansas Farmer*, *The Mail and Breeze*, *THE KANSAS INDUSTRIALIST*, *Wallace's Farmer*, and many other good farm periodicals. Beside these, technical bulletins and magazines treating of veterinary science are on the tables.

ALUMNI NOTES.

Amos H. Gish, '10, visited college last week. He has a thriving veterinary practice at Eldorado.

W. H. Goodwin, '05, has written a bulletin on spray machinery. Mr. Goodwin is at the Ohio experiment station, Wooster, Ohio.

George Moffatt, a graduate in mechanical engineering in the '08 class, is now employed as a machinist in the ship yards at Seattle, Washington.

Miss Annice Howell, '08, and L. L. King, '09, were married, December 29, at Silver Lake, Kansas. They will live in Topeka, where Mr. King is employed by the Santa Fé.

Mr. and Mrs. H. E. Porter, of 1024 Houston Street, are the parents of an eight-pound baby girl, born January 8. Mr. Porter, '07, is assistant in mathematics.

Miss Grace Enlow, a former student, and L. G. (Shorty) Haines, '09, were married, January 6, at Wamego, Kansas. They will live in New Mexico, where "Shorty" has a government position.

Phil Cobb, of Wagoner, Oklahoma, son of Samuel S. Cobb, '89, has won the prize for the best boy's essay on dairying offered by the Oklahoma state board of agriculture. The essays were presented at the recent state fair at Oklahoma City. Mr. Cobb told of the increased profits that come from the weighing and testing of milk

and the keeping of records. The prize was a Babcock cream and milk tester.

E. C. Butterfield, '98, superintendent of the Arlington experiment station farm, United States Department of Agriculture, Arlington, Virginia, stopped in Manhattan a few days last week to visit home people. Mr. Butterfield has been on the Pacific coast for the past six weeks studying sugar-beet problems. He is enroute to Washington to take up his work at Arlington.

W. E. Mathewson, '01, is joint author of Circular No. 65 of the bureau of chemistry, United States Department of Agriculture, on the "Estimation of Iodine in Organic Compounds and Its Separation from Other Halogens." Mr. Mathewson is an assistant chemist in the New York Food and Drug Inspection Laboratory and finds there abundant opportunity for the exercise of his high skill as an analyst.

A CALIFORNIA MEETING.

The mid-winter meeting of the Golden Gate branch of the K. S. A. C. Alumni Association was held at the home of Mr. and Mrs. M. S. Cole, 266 Sixtieth Street, Oakland, California, New Year's eve. Their pretty bungalow was most artistically decorated with holiday greens and the college colors, and there were so many familiar faces that every one felt at home. It made one think of the gatherings in the main hall at the beginning of a new year at the college, every one was so busy talking over old times at K. S. A. C. and, incidentally, how they all happened to launch "way out in California," as it seemed to them in those days.

Soon after the guests' arrival a delicious two-course lunch was served by the hostess, assisted by Mrs. Haselwood, Mrs. Reed, Mrs. Wilkinson, and Mrs. Fielding. A short business session followed. Officers were elected for 1911: M. S. Cole, '02, president; C. A. Pyle, '04, vice-president; Crete (Spencer) Fielding, '05, secretary-treasurer.

Mr. and Mrs. Cole then led the grand march, after which all danced the Virginia reel. The ringing of bells soon announced the New Year. After exchanging many sincere wishes for the New Year, the crowd departed, having spent a most enjoyable evening and looking forward to the next meeting in March. Those present were: M. S. Cole, '02, and Mrs. Cole; F. W. Haselwood, '01, and Maude (Zimmerman) Haselwood '02; A. J. Reed, '03, and Mrs. Reed; R. C. Mitchell, ex-'04, and Mrs. Mitchell; C. A. Pyle, '04, and Vera (McDonald) Pyle, '04; W. J. Wilkinson, '05, and Mrs. Wilkinson; L. W. Fielding, '05, and Crete (Spencer) Fielding, '05; Mr. and Mrs. Maurer; Leon M. Davis, '09; Bertha Schwab, '10; Rose Wilkinson; G. E. Seebert. This organization started a year ago with a dozen members and now has twenty-six enrolled.

The College-Bred Reporter.

Never was there greater opportunity for the college man in any field to-day than in the newspaper field. It ranks among the professions, and the University of Wisconsin is among the pioneers to realize the need for training in this as in other professions, and it has provided such training. A roster of the staffs of Milwaukee papers is a standing refutation of the charge that college men are not adapted to this work. The course in journalism gives them ideals and foundation for newspaper work as no other preparation can.—W. L. W. Distelhorst, of the *Milwaukee Journal*.

Testing Seed Corn.

The agronomy department has tested for germination the 200 bushels of corn that will be shipped to the farmers of the state next spring. The sorting of this seed and of the Kafir and cane seed will be finished soon. About 500 bushels of cane and Kafir-corn seed will be sold this year.

Why, the Very Ideal!

Probably the queerest thing about the much praised "dry cure" for hams is the fact that it is most successfully done by Waters.

HE'S BEEN A BUSY BOY.

NO IDLE MOMENTS IN THE 20 YEARS OF JOHN LUSK'S LIFE.

The Remarkable Letter Received a Few Days Ago in the College From a Prospective Student—Little Left Except the Lecture Platform.

This letter, received a few days ago, describes such a busy life in a way so unconsciously humorous that it was decided to print it as an example for less active boys.—Ed.

KISMET, KANS., Jan. 2, 1911.

Dear Sir: For the last two or three years I've been thinking seriously of attending K. S. A. C. I am a boy twenty years of age, five ft. eleven in. in height and weigh some 170 lbs. I have red hair, brown eyes and freckles, and have been called everything from "Red" and "Brick" to Mr. Lusk and John N., Jr.,—so you see I'm rich in names at least. I've lived everywhere from Neb. and Ind. to Mo. and Kans. Worked at everything almost, from carrying water on Public works in K. C. and opening doors in a packing house in the same city, when only nine years of age (scabbing in a butcher's strike) to farming in Seward Co., and Cow-Punchin' in W. Texas. I've done hazardous deeds in almost every conceivable way such as riding bronchos to proving up a school-claim in S. W. Kansas. I have gone to school from kindergarten and grade school to High School and Business College. I've studied something besides those included in those courses of course, as I graduated from a Commercial College before I was fifteen (15) which accts. for my reckless handwriting. Have lived on a farm for the last four years and the more I see of it the more I like it, hence my aspiration. Books by the hundred have I read. Fiction, Art and Science, including those of Handling Horses, Ag. in all its phases, such as Animal and Plant Nutrition, Judging Stock and Grain, growing crops, diversified and general, farm management and everything pertaining to Agl. Science; I have studied Metaphysics and Mesmerism, phrenology and magnetism, clairvoyance and black art until I wish I could empty it out to make room for things more useful; I've studied History from Adam in the Garden down to Joe Cannon and the Aldrich-Payne Bill. I've practiced art in everything from marbles, tops, base-ball, football and tennis to running a walking plow, riding broncho outlaws, and handling the same, to whirling a braided blacksnake around the ears of a twelve mule team on my fathers farm. I've read, recited, spoke, debated, presided at Literary Societies and served at everything from editor to Pres. I've belonged to societies from Japanese Letter Societies, of which I obtained the name of the first one in Kans., to the Christian Church in which they make me act as a Deacon, Treas., and Preacher. There is a preacher down here who tries to make me think that I am a Campbell, Spurgeon, Sam Jones, Moody or Talmage; consequently he started me to preaching and I can't name the books of the bible only on Sunday. However, I love to read sermons and lectures, orations and speeches and have read them by the hundreds, anywhere from Achilles, Pericles, Cleon, Isocrates and Demosthenes to "Cato the Censor," Cicero, Mark Antony, Julius Ceasar, Otho, down to Stephen A. Douglas and Abe Lincoln, Theo. Roosevelt and W. J. Bryan, E. H. Madison, Victor Murdock and W. R. Stubbs. I've made a special study of the H. W. Campbell System of Farming and I have experimented for the K. S. E. S., and now after trying everything else I've decided (if I can get financially able) to go thru K. S. A. C.

But here's the rub: I never went long enough to H. S. and it has been so long since I did go (6 years) that I could scarcely tell you the difference between algebra and Latin, or English and woodwork; but I do hate to spend two years making up for what I have forgotten. According to the catalogue a student must have the credit of 8 units before entering the Freshman year. By a little reviewing I can pass an examination in Eng-

lish, two units; Physical Science, two units; Agriculture, one unit; Bookkeeping and Commercial Law, 1 unit each; and a lot more which really wouldn't come under any heading mentioned in the catalogue.

Do you suppose I could get in on the Freshman Class if I could pass these examinations of which I speak? I sure want to come to the Agr. Col., but I don't like to have to go more than four years. I believe with the understanding and knowledge which I possess of Agr. from both Reading and Experience, that I could soon make up any deficiencies which I may have. Perhaps it would be better to say that I wish to take either the Animal Husbandry Course or Agronomy.

Would thank you very much for an answer at your first possible convenience. Would you advise me to start now or review until next Sept. 20, and start in then?

Thanking you in advance and begging your pardon for my curiosity, I remain,

Yours truly,
JOHN LUSK.

THREE MEALS FOR FOUR, \$1.10.

A Group of Menus Showing How to do Without Meat.

Here are three meals that can be served to a family of four for a \$1.10. A day's menu such as this shows the possibilities of getting through the day without using meat. The dinner probably will find more favor with those whose parents emigrated to America from New England than it will with those from west of the Alleghanies. If you have some different ideas as to how to get thorough a day without using meat, THE KANSAS INDUSTRIALIST will be pleased to hear from you.

BREAKFAST		
Wheatena	Baked Apples	Toast
	Hashed Brown Potatoes	
	Coffee	
DINNER		
Clear Tomato Soup	Croutons	
Baked Beans	Boston Brown Bread	
	Cabbage Salad	
Cottage Pudding	Lemon Sauce	
SUPPER		
Scalloped Corn	Baking Powder Biscuit	
	Honey	
	Chocolate Blanc Mange	
	Tea	

SKIMMED MILK FOR HENS.

An Egg-Producing Food and a Substitute for Expensive Beef Scraps.

Eggs at this time of year mean profit. And if you feed your hens properly you are likely to get the eggs. Meat food is essential, but beef scraps at \$3 a hundred pounds are too expensive. There is something cheaper.

On nearly every farm there is a form of meat food whose value as an egg producer few seem to realize. It is sweet skimmed milk. Experiments at the poultry plant of the Kansas State Agricultural College show that hens fed on skimmed milk laid more eggs and made a greater profit than hens that were fed beef scraps in the same ratio. Skimmed milk also demonstrated its superiority over curd in these experiments.

The skimmed milk should be fed sweet, daily, in clean pans. Cover the pans with a slatted top to prevent the busy scratchers from contaminating the milk. Milk makes an ideal breeding place for germs of disease; therefore it should be kept as clean as possible.

Skimmed milk always has been pronounced an ideal food for chicks, but its use as an egg producer is not generally understood. Milk-fed poultry brings the highest price on the market. A fowl that is fed milk from the time it is hatched until marketed makes a high-class product.

Remember these three things when feeding skimmed milk:

1. Keep the milk clean and sweet.
2. If fed during warm weather, feed sparingly and sour the milk before feeding.
3. Never force the hens to drink the milk. Always have a supply of fresh water before them.

WAS IT GOOD FARMING?

IT CERTAINLY WAS, IF THE WHEAT YIELD COUNTED.

Look Over a Few Figures from the Western Kansas Station and See What Cultivation Did and What Lack of It Cost.

The state's average wheat yield: 13½ bushels an acre.

The average in Ellis county: 16 bushels an acre.

The average at the Fort Hays—Western Kansas—experiment station: 25.87, nearly 26 bushels an acre.

What does that prove? Doesn't it show that good farming pays? Don't you believe—you 8- and 10- and 12-bushel farmers—that there may, after all, be something to this scientific farming you've been neglecting all these years? Well, possibly.

But mind, if you please, the yield at Hays wasn't only 25.87 bushels. That was the average. The experiment farm harvested 15,902½ bushels of wheat, last summer, from 615 acres, five acres being accounted loss because of grasshoppers of the previous fall or of the winter's effects.

NEARLY 26 BUSHEL.

The average at Hays was 25.87 bushels an acre; the best yield, on a small tract, being almost 40 bushels; the lowest, 17.6 bushels. These returns upon land which is about the same as hundreds of acres of Ellis county land growing wheat: side by side with fields contributing as low a yield as 5 bushels an acre, from seed the like of which many growers have, seem to indicate that good farming pays. The experiment station wheat fields had the same rains, sunshine, winds, tardy or timely, that visited neighboring farms. Why, then, this great difference?

But take the yields at Hays in separate lots: An eighty on which wheat is produced by the aid of coarse, barn manure, spread upon the land during two preceding seasons, yielded 23.42 bushels an acre last summer.

Twenty acres, late sown, between corn stalks, matured 32 bushels an acre.

One hundred and forty acres given ordinary good plowing and harrowing in the soil preparation for the last four years, returned 28.42 bushels an acre.

HERE ARE MORE GOOD ONES.

An eighty, farmed by a lessee for five years with wheat yields that averaged 10 bushels an acre, was cultivated four years by the experiment station. The fall planting of 1909 was done the last of all. That eighty gave 17.6 bushels an acre on late, dry plowing.

Seventy-five acres, fallowed in 1909, twice disked in the late summer, plowed early and harrowed, seeded with graded wheat at the rate of 3 pecks an acre, gave a yield of 36.58 bushels an acre.

A quarter section, on which wheat has been produced for eight years, but with average good plowing and harrowing every year, produced 22 bushels an acre in 1910.

There are no secret processes in the wheat demonstrations at the Hays experiment station. Its machinery and methods are not beyond the reach of any farmer interested in increasing the acre yield of Kansas wheat to the extent of personal labor on his own fields. If his acres are too numerous and help is hard to get let him thoroughly cultivate fewer acres. It will return him a better average profit over a period of years.

THE AWFUL NEWS.

Nothing Except Shocks Nowadays for the Innocent Reader of Papers.

"Escaped an Awful Death!"
"A Terrible Danger Averted."
"A Happy Home Once More."

No, gentle reader, these are not the headlines from a yellow newspaper. They are not scoops. They are not even news. They are just the mean, low-down, deceptive allurements that are appearing nowadays in the country press to trap the unsuspecting, abused farmer into reading a story that begins like a Laura Jean Libbey love story and ends with a kidney remedy.

WHY YIELDS ARE LOW.

CONTINUOUS CROPPING, DR. THORNE SHOWS, HAS ROBBED THE SOIL.

Think of Corn Averaging 15 Bushels Less to the Acre Now Than 50 Years Ago—The Ohio Expert Quotes Startling Figures.

The average yield of corn in Kansas in 1860-'69 was 36.15 bushels an acre. In 1900-'09 it had fallen to 21.78 bushels! In the same periods wheat yielded 17.06 and 13.16 bushels. In 1890 to 1899 it had fallen to only 10.56 bushels!

It would be hard to find more convincing proof of the big mistake that many farmers have made in those 50 years—the continual robbing of the soil. Of course the increased area in cultivation has tended to reduce the average yield, but it does not account for the lamentable decrease shown by Dr. C. E. Thorne, of the Ohio experiment station, in his address in the old chapel a few mornings ago. Dr. Thorne said:

FIGURES THAT CONVINCE.

"I am aware that farmers in the rich valleys of Virginia, or in Ohio—the Muskingum, Scioto, Miami—say they are growing crops as large to-day as they ever did, although they are in many cases practicing the continuous cropping of corn upon the same land year after year. But Ohio has kept statistics of its crop production for 60 years, these statistics being carefully collected by the township assessors every year. These statistics show that in these rich valleys so admirably adapted to the culture of corn the yield of that crop was smaller during the 10 years from 1880 to 1889, inclusive, than during the similar period from 1850 to 1859. The falling off in some counties amounted to 10 bushels or more. The history of wheat culture in the Red River valley is another confirmation of this same principle, where the yield has gone down to a point far below the earlier yields, as stated by Director Worst, of the North Dakota experiment station.

"Kansas statistics also furnish a valuable lesson on this point. These statistics have been gathered since 1860. There was a tremendous falling off in the yield of corn during this period. The yield of wheat, also, decreased, notwithstanding the great extension of wheat culture through the counties of the middle of the state, many of which are growing annually more than 100,000 acres of wheat a year.

WHERE KANSAS LOST.

PERIOD.	Av. yield per acre.		
	Corn, bus.	Oats, bus.	Wheat bus.
1860-1869	36.15	33.50	17.06
1870-1879	36.71	32.21	14.51
1880-1889	29.79	33.29	14.32
1890-1899	20.84	21.62	10.56
1900-1909	21.78	22.77	13.16

"I do not forget that, with respect to corn especially, a part of this retrograde movement in yield per acre is due to the extension of the agricultural area into the region in which the rainfall is deficient, but let us take two of the oldest settled counties in the state, two of the most fortunately located counties, Douglas and Johnson, lying at the eastern end of the state, and we find that their late yields of corn, while higher than the yields for the average of the state, are still below what the state was yielding 40 years ago, though the wheat yield is somewhat higher.

"Wherever we go in this rich, new land of ours we find farmers working on the principle that the soil is inexhaustible, who believe they may go on indefinitely practicing a system of agriculture which all past history has shown to be ruinous. But as the wave of migration has moved westward it has left behind it an area of wasted resources, of diminished production, with a soil more difficult to cultivate and less responsive to the labor bestowed on it. It is a difficult task to persuade the farmer on virgin soil that his methods are unwise. The change in productiveness is so gradu-

al that he does not realize that it is going on, just as those farmers in the Scioto and Miami valleys, who say they are growing crops as large as ever, have been shown to be altogether wrong by the logic of statistics. The changes took place so gradually that they were not able to see them."

SHOW THE FLAG AT SCHOOL.

Any Principal That Doesn't Do This Violates a Law.

You have relatives or friends in the public schools even if you do not attend. Perhaps you are a school-teacher or a member of the school board. If so, how many times a week do you break the laws of the state of Kansas?

Do you display the American flag everyday outside the building, or in the school room if the weather is stormy? If you do not, do so and teach the children, by example, to obey the law. The General Statutes of Kansas for 1909 says, on page 1672, that it shall be the duty of the school authorities to display a United States flag on or near the school building, and when the weather will not permit, it shall be displayed in the principal room of the school. The law has been in effect since 1907.

CITY OR FARM—A CONTRAST.

One More Student Contribution on the Ever Pertinent Topic.

"The average farmhouse is good enough—for the farmer," a merchant in a Kansas town said recently. He was not an average merchant, but one that had a perverted idea of average farm conditions. He lived in a modern home with all the conveniences a skilled architect could devise. He had an efficient, up-to-date heating plant, hot and cold water in kitchen, lavatory, bath-room and laundry, a kitchen cabinet, china closet, dumb waiter, and wardrobes for the whole family.

If you would be satisfied always to eat black molasses on your bread, never taste honey. If you don't want to become dissatisfied with your ox-wagon pace, stay out of motor-cars. If you would feel the inadequacy of the make-believe bath in a cold room where you use one end of your towel for a sponge, visit your city friend; go into his bathroom before going down to breakfast, and experience the luxury of a dip that will bring to mind the old swimming hole of boyhood days.

There is not a word of criticism for the merchant who was able to build such a home out of the profits of his business which, in this case, was largely with the farmers; but the question may be asked, why does not the average farmer have the comforts of as good a home as does the average business man in the city?

Definitely and briefly, Mr. and Mrs. Farmer and family should quit forcing themselves to the rigid economy which has, perhaps, been necessary but which has become a habit. Instead of buying more land, remodel the old house, or build a new one and include in the plan modern equipment. Make the homestead a better place to live than a city home on a city lot, where one can scarcely turn round without jostling his neighbor. Stay on the farm, utilize the available forces and machinery to your own pleasure and comfort. Don't dream of it, but do it.

DO YOU UNDERSTAND SILAGE?

The Short Course that Began January 3 Gives a Chance to Learn.

Silage is the best feed available for cattle and sheep. It gives the stock the green succulence of June pastures. It is as well liked by stock as pasture in its prime. It is a great milk producer. It is economical. One acre of average corn in eastern Kansas will feed two cows one year outside of the grass season.

Silage and alfalfa are the great cheap rations of Kansas. They enable the farmer to keep more stock on the same area. The stock do better. The land becomes richer. The advantages of the silo will be fully described during the farmers' short course that began January 3. The close will be March 14.

POWER OR POTATOES?

GERMANS SAY WATER IS WORTH 55 TIMES MORE IN A FIELD.

Investigation Shows that the Humble Spud Will Bring in the More Profit if the Water is Used for Irrigating.

It is more profitable to use water for irrigating a field of potatoes than for power. If you do not believe this, consider the experiments of the Kaiser Wilhelm Agricultural College at Bromberg, Germany, directed by Prof. Kruger. These experiments, only recently reported, showed that the value of a cubic meter of water was increased 55 times when used in the growing of the homely spud.

The cost of a cubic meter of water for power purposes was determined. Then the economical advantage of water over steam power was obtained. Next, tests were made as to the increased yield that irrigation would produce in a potato field. The field tests required three years. The profit of a cubic meter of water used for irrigating was found to be 9.52 mills. A cubic meter of water for a power-plant had a net return of 0.98 mill, or fifty-five times more when used for irrigation than if used for power.

Germany leads the world in industrial investigation or research. Its universities are famed for such work. It is doubtful, too, if any country has done more to advance agriculture or in devising ways to utilize waste. The Germans are great farmers. German gardeners know about all there is to know of intensive methods, and moreover are willing to work harder than most men in accomplishing any given task.

Irrigation has received much attention in the Fatherland, but this latest demonstration of the potato *versus* the power-plant is a new way of looking at the question.

Irrigation has been an agricultural problem in the United States for many years, but it is doubtful if American engineers have considered it in just this way. But German professors overlooked the fact that in some of the western states of this country water is used for irrigation and power and that Americans derive profit in both directions.

THE WEIGHT OF SEEDS.

How Many Bushels of Alfalfa Seed in 2,000 Pounds?

Do you know the weights of the different kinds of seeds? If you had 2,000 pounds of alfalfa seed, how many bushels would you have? The following table taken from the United States department of agriculture year-book, may be of interest to many. It will be noticed that two of the grains have no legal weight in Kansas. These weights apply only in Kansas, as many of them are different in other states. Why timothy and broom-corn should have no legal weight is uncertain. The center of the broom-corn markets is in the southwest corner of Kansas. Thousands of tons of brush and hundreds of bushels of seed are grown annually in the western part of the state.

	Lbs. per bu.
Alfalfa	60
Barley	48
Blue-grass, English	22
Blue-grass, native	14
Broom-corn (not legal)	30-57
Buckwheat	50
Clover	60
Corn, ear	70
Corn, shelled	56
Meadow fescue	24
Millet	50
Oats	32
Potatoes	60
Potatoes, sweet	50
Rye	56
Sorghum	56
Timothy (not legal)	52-57

An English Seminar.

The members of the English department met at the home of Professor Brink, 9 Park Road, Thursday night, January 12, to discuss the work of the department and to engage in literary study. The next meeting will be at the home of L. H. Beall, assistant professor, January 26.

One ounce of loyalty is worth a pound of cleverness.—*Fra Elbertus.*

Kansas State Agricultural College

College of Agriculture and Mechanic Arts

COURSES OF STUDY

As organized at present, the Kansas State Agricultural College offers 39 definite courses of study. These are

Agricultural Group: Four-year courses in agronomy, in animal husbandry, in dairying, in horticulture, and in veterinary science. A two-year course in agriculture, two-year short winter courses in agriculture and in dairying. A one-year short winter course in dairy manufacture, a short course in testing dairy products, and a six-week summer course for teachers.

Mechanic Arts Group: Four-year courses in mechanical engineering, in electrical engineering, in civil engineering, in architecture, and in printing. One-year courses in foundry work and pattern making, in blacksmithing, in drafting and machine shop practice, and in boiler and engine operation. A summer course in manual training for teachers.

Home Economics: A four-year course in home economics, a six-month course in housekeeping, and a twenty-week course for teachers.

General Science: Fifteen different organized four-year courses in pure and applied science in mathematical, physical, biological, educational and economical lines.

ENTRANCE REQUIREMENTS

The College reaches down to the common school. It takes students as soon as they have completed the common-school course. Young people who enter the College with a common-school diploma, or who are able to take an examination in the subjects required for such diploma, may enter the sub-freshman class.

Students who have had two years' work in any accredited high school will be able to enter the Agricultural College in the freshman year of any of the courses, and will there receive not only instruction in the academic branches named, but will receive the laboratory drill in corn judging, stock judging, shop work, cooking, sewing, etc.

For catalogue or any information address

President H. J. Waters,

Manhattan,

Kansas

A LEAN-TO GREENHOUSE.

HERE'S A LIST OF THE MATERIAL TO BUY AND THE COST.

Every Well-Equipped Rural Town Should Have One—Not Only Valuable for Flowers, but for Vegetables Also, if It Should Be Desired.

A small greenhouse, of the lean-to type, can be made a profitable investment. In the majority of towns, and even in the larger cities, there is not usually an overabundance of pot-grown bulbs. Therefore, they are profitable to grow in a small greenhouse and require little care.

An inexpensive and practicable size is 15x9 feet. It should be built against the side of a dwelling. A very convenient arrangement of the inside of a greenhouse of this type is to have on the right of the entrance a bench 15x9 1/2 feet and 6 inches deep, raised about 2 1/2 feet from the floor. To avoid dampness underfoot it is best to have a cement walk, 36 inches wide, down the center of the building. At the other end of the house may be placed a small box, about 2x2 feet, for growing "asparagus sprengeri" for carnation greens.

On the left of the door you should have a bench 3x3 feet and 6 inches deep, and also a work bench with electric light and running water convenient. The remainder of the space on the left side of the greenhouse is taken up with a bench a trifle higher than the other benches and about twelve inches deep. Above the benches on this side is a good place for brackets, on which boards may be laid for the seeds in the spring.

In heating the greenhouse, about the best and most inexpensive apparatus is a greenhouse hot-water heater. This may be put in the cellar and pipes run through the cellar window into the greenhouse. Three-inch pipes are laid under all the benches.

If the prospective florist buys his own lumber and hires the labor by the

day, the cost should be approximately like this:

Lumber:	
4x4 inches and 2x3 inches chestnut posts	\$ 2 76
112 feet sash rails and caps, cypress	6 72
Bench lumber, 1 1/4 inch pine	8 38
Sashes and door, hard pine	13 00
Door-frame and casing, hard pine	1 50
Labor	9 00
Glass, 16x24 inches	12 50
Greenhouse heater and piping	90 00
Paint	1 00
Incidentals:	
Sheathing paper, electric light, water connection	2 00
Cement walk, put in after greenhouse was built	3 50
	\$151 11

Some of the best bulbs to grow during the winter are hyacinth, narcissus, daffodils, tulips, and jonquils. If bulbs are potted, say from September 15 to November 1, they will give a succession of bloom from December to April. Many potted bulbs do better.

BUSY ENGLISH FACULTY.

All Sorts of Valuable Research Work is in Progress.

The English department is doing things. Besides the work in the class rooms, the members of the English faculty are doing considerable work of a research nature. Bibliographies are the pet productions of this department. Miss Estella Boot has prepared a complete bibliography of applied English in secondary schools and colleges. Miss Ada Rice has been collecting a large number of industrial subjects for the use of the English classes in narration and description. Prof. N. A. Crawford has prepared a complete bibliography of the history of the English language, for the use of the English faculty.

At the Good Roads Meeting.

H. J. Waters, president of the Kansas State Agricultural College; W. S. Gearhart, highway engineer; A. R. Losh, assistant; and L. E. Conrad, professor of civil engineering, attended the State Good Roads meeting, at Wichita, Tuesday, Wednesday, and Thursday.

An American religion: Work, play, breathe, bathe, study, live, laugh, and love.—*Fra Elbertus.*

THE KANSAS INDUSTRIALIST

Volume 37

Kansas State Agricultural College, Manhattan, Saturday, January 28, 1911

Number 17

HOW TO COOK THE HAM.

PRESIDENT WATERS' MAN, PERRY, DISCLOSES THE PRECIOUS SECRET.

It Requires Hours and Hours of Careful Nursing to Produce the Porcine Confection for Which the Waters Menu Has Become Noted.

Perry may not know much about biological influences or the processes of nutrition; he might find it hard to distinguish between carbohydrates and proteins; but Perry can cook ham. Perry, of course you remember, is President Waters' man Friday. To see Perry affectionately regard the Waters collection of old hams is to see something you will never forget. To eat some of his sausage is to record one more reason for wishing to live.

"I have interviewed Perry on the cooking of these old hams," said President Waters, a few days ago. "This is his general plan:

"He first thoroughly washes the ham with a scrubbing brush to get all the mould off and have it thoroughly clean. He then soaks it in warm water for about twelve hours, keeping the ham submerged. Then he puts it into a dishpan in which he has placed a plate or pie pan to keep the ham from coming into contact with the bottom of the pan, covering it with another dishpan. He boils it for about three hours for a small or medium-sized ham, or four hours for a large one. After taking it off Perry removes the skin, rubs a handful of New Orleans or brown sugar over it, covers it lightly with mixed spices, puts it into a hot oven and bakes it for about half an hour. It is then cooled and served cold."

THE SCIENCE CLUB'S PROGRAM.

Meetings and Important Papers Are Arranged for the Year.

The program of the Science Club for the year has just been issued from the school of printing in Kedzie Hall. The next meeting is to be February 6. J. T. Willard, professor of chemistry, will speak on "The Influence of Certain Chemical Substances on the Baking Qualities of Flour." L. A. Fitz, head of the department of milling industry, will tell of "Investigations of Sweat in Wheat." The other meetings for the year are set for March 6, April 3, May 1, June 5, and October 2. Papers arranged for are of the highest scientific value and are of particular importance in showing the broad field of investigative work cultivated by the members. Those elected to membership in the meeting January 2 were: D. M. Wilson, F. H. Slack, Jacob Lund, J. W. Searson, R. K. Nabours, C. A. Utt, F. E. Wilson, A. E. White, F. S. Jacoby, W. W. Carlson, Charles Jablow, L. E. Holton, T. E. Schreiner, A. W. Rudnick, C. F. Chase, Otto Maurer, H. M. Chandler, J. H. Hollar, O. E. Reed, E. B. McCormick, George Link, E. C. Miller, Mrs. M. P. Van Zile, Miss A. W. Putnam, Miss C. Morton, P. E. Crabtree, J. B. Fitch. The names of about twenty more proposed members were submitted by the secretary and will be voted upon at the next regular meeting. Henry Jackson Waters is president of the club and A. A. Potter secretary.

WIRELESS STATION AT Y. M. C. A.

Irving Root, a Student, Says He Has Intercepted Messages.

If you happen to glance up as you pass the Y. M. C. A. building you will see a number of wires above it. They are not used to hang the family washing nor are they used by the gymnasium classes for wire walking "stunts." They are the wire part of a wireless telegraph station.

Irving Root, a college student, has equipped the station. He says he has caught parts of messages, presumably from the Fort Riley or the Fort

Leavenworth stations. It is the only wireless station in Manhattan. The closest station is at Fort Riley. Other stations are at Salina, Hutchinson, Wichita, Topeka, Kansas City, and Fort Leavenworth.

The students were allowed to put wires on the college water-tank, also. Now they are working successfully, and in doing so are stirring up interest in something few students know anything about. Clifford Carr and W. L. Heard, senior electrical engineers, will work up material for their theses in wireless telegraph investigations. They hope to erect a station on the college grounds at once and at some other outside point, probably at Ft. Riley, and establish communication.

An educational institution, of any sort, to meet the demands of to-day, cannot stand still—it must go either forward or backward. What, ten years ago, constituted a successful agricultural college would to-day be a small and unimportant institution indeed. The demands of the immediate future promise to be as large and important as have been those of the recent past.

The department of electrical engineering has done some work in investigating the problems encountered in wireless telegraphy and is planning to give more instruction in the future.

HAPGOOD ON "PROGRESS."

After Chapel the Editor of Collier's Spoke to Students of Journalism.

Probably every student enrolled in the Kansas State Agricultural College attended chapel Friday morning to hear Norman Hapgood, editor of *Collier's Weekly*, speak on "Progress." Mr. Hapgood's address occupied about 45 minutes. It was his first visit to the college or Manhattan. Probably no other speaker could have been quite so interesting to the students. This was not because the students expected oratory, for Mr. Hapgood is not an orator; but because every one of them, probably, knew the work that *Collier's Weekly* has done and is doing to purify American politics. In that respect, particularly, Mr. Hapgood was a person in whom every student was interested. The fact that they listened closely was proved conclusively when they snapped up, with good-natured applause, a slip of the tongue in which Mr. Hapgood made Ruth of Bible times the contemporary of George Washington. His address, which he referred to as a little talk, was distinctly inspiring to college students and was liberally applauded.

Mr. Hapgood spoke again at 11 o'clock to the students in industrial journalism in Kedzie Hall. Room 55 was not large enough to hold all those that desired to enter. The students in business management in Prof. Kammeyer's department and students of English and mathematics filled the aisles and hallway. Mr. Hapgood spoke on what might be called "The Morals of American Newspapers," impressing upon his hearers the importance of high standards in the business in which many of them intended to embark upon leaving college. His assurance that everything pertaining to agriculture and the industries is especially welcome at the desks of all the great publications was particularly cheering to the young men and young women studying how to write that sort of material.

At 12 o'clock, Mr. Hapgood, the members of the board of regents, President Waters and one or two others were entertained at lunch in the domestic science and art building, where Mrs. Mary Pierce Van Zile presided. Mr. Hapgood left for Topeka at 3:30 in the afternoon.

The valuable man in any business is the man who can and will cooperate with other men.—*Fra Elbertus.*

TO LIGHT A FARM HOME.

NO LONGER AN EXCUSE FOR USING THE OLD OIL LAMPS.

Here's an Outfit for a Few Hundred Dollars—And What's that to a Modern Farmer?—That Will Brighten Life.

MANHATTAN, KANSAS, Jan. 26.—Any farmer, no matter where he lives, can light his home with electricity and enjoy other conveniences at the same time. A lighting outfit can be installed at a cost of from \$400 to \$1,000, depending upon the conditions; Benjamin F. Eyer, professor of electrical engineering in the Kansas State Agri-

cultural College, says so. He is giving the subject particular attention. Many farmers own and operate gasoline engines of two or more horsepower. A one-horsepower engine is large enough for lighting purposes and for some small power besides.

It all depends upon what the electric outfit will be called upon to do as to the first cost and maintenance. A complete outfit for lighting consists of 16 cells of storage battery, a dynamo, a switchboard, and a gasoline engine, or other source of power—water or steam. The new tungsten metal-filament incandescent lamp has made it possible to use a storage battery to good advantage on the farm. This has been brought about in this way: The tungsten lamps consume less than one-half the electrical energy that the old carbon lamps required and give a much better and stronger light. They are made for 32-volt circuits, which require only 16 cells of storage battery of moderate capacity. The old carbon lamps required either 55 cells of storage battery or a smaller number of very large capacity. In either case, the cost was prohibitive.

GLOOMY OIL LAMPS.

The gloomiest thing on a farm is the light, the oil lamps. Not only are they a nuisance, a source of labor—and danger, too—but they are dis-

this outfit. The batteries have not sufficient capacity. This is about what could be done with this outfit: Five lamps of 16 candle-power could be used 2½ hours a day, three lamps of 16 candle-power for 4½ hours, or two 16-candlepower lamps for 8 hours. If 8-candlepower lamps were used, the number could be doubled for the same time rating.

FOR POWER WORK.

If \$30 be added to the cost of this outfit, twice the number of lamps may be operated for the same time rating. The extra \$30 is applied to increase the capacity of the battery. Adding \$200 to the cost of the outfit—total \$600—the capacity would be adequate to do some small power work, such as operating a four-pound electric flat-iron, a vacuum cleaner, or a sewing machine motor.

The capacity of this outfit would be, approximately: 32 16-candlepower lamps for 3 hours, or 32 8-candlepower lamps for 8 hours, or 10 8-candlepower lamps 4½ hours a day, for four days, without recharge of battery. Or you could run 10 8-candlepower lamps for two days, Sunday and Monday, say, 4½ hours a day, and run an electric washing machine Monday for two hours, and the four-pound electric flat-iron Tuesday for three hours, with enough energy left in the batteries to run the sewing machine motor one hour before recharging the battery.

No need of all this gloom. If a farmer will shelter his farm machinery he can, and should, spend what he saves for an electric light outfit for the home. So many farmers have gasoline engines already that the project is simplified. The money spent for new machinery in one or two years will equip your home. The agricultural college expects to publish a series of articles from week to week, describing rural lighting systems and conveniences.

THE WONDERS OF CORN.

Cob Pipes and Cattle Feed Only Side Lines for This Crop.

You have seen corn all your life. Did you ever wonder how many things are made from it? You know that it is used as a feed and perhaps you remember that the cob is used for corn-cob pipes; but did you think of the other uses? Over thirty commercial products are made from corn. Among them: six kinds of glucose used in table syrup manufacture; four kinds of crystal glucose used in candy making; corn oil used by makers of fiber paint

The amount and kind of service the people of a state may expect from their agricultural college will be definitely gauged by the financial support accorded it.

—Henry Jackson Waters, in "The Farmer of To-morrow."

couraging and depressing. Nothing brightens up the family, and the home generally, like a clear light.

Suppose a farmer desires to light his house and barn and have an ornamental light or two on the driveway—but has no gasoline engine available for power. Call this Case Number One. An outfit suitable here would consist of a gasoline engine of one horsepower, a dynamo of approximately one-half kilowatt, 16 cells of storage battery capable of giving one and one-half amperes of current for seven and one-half to eight hours, and a small switchboard. The outfit complete, made by reliable manufacturers, would cost approximately \$400 and the freight.

This does not include house wiring or the wiring from the storage battery to the place where light is to be used. No small motors should be run from

and arubber substitutes; granulated gum, distilled spirits, fusel-oil, alcohol, corn-meal, and many other important products.

From the stalk are taken cellulose for packing holes in battle-ships pierced by bullets; pyroxylin varnish; paper pulp, and live-stock foods.

And the humble cob has its uses. When ground into corn-cob meal, it aids digestion in cattle by keeping the meal from packing in the stomach. It is used for corks—where is the farmer that doesn't use a cob stopper in the water jug?—and, finally, for pipes. It has a high fuel value. Three tons contain as many heat units as a ton of hard coal.

The cob ashes have a high value. They may be fed to the hogs and thus aid in keeping them healthy, or they may be used as a fertilizer. Cob ashes are very rich in potash.

TO SCORE THE ORATORS.

A NEW CARD SYSTEM PROPOSED BY PROF. KAMMEYER.

No Reason, the Director of Speaking Says, Why the Idea Used in Judging Grain or Stock Should Not Apply Here.

Now in the season of oratorical discontent comes Julius Ernest Kammeyer, professor of economics and director of public speaking in the Kansas State Agricultural College, and proposes a score-card for the contestants. Every college in the country is spreading itself just now in preparation for the annual word and arm battle, the great conflict in which the English language will writhe and twist and go through all sorts of gyrations from A to izzard, whatever that is. Prof. Kammeyer's score-card is modeled on the cards used in other contests of different kinds. A horse or a steer, he says, is scored by critics on a definite number of points. This is done, also, in grain judging. Why, then, should not any ponderable product be subject to the same standards? The idea is new. Prof. Kammeyer arranges his card this way:

Bases of criticism.	Values
I. Technique:	
1. Vocal:	55
a. Articulation.....	10
b. Pronunciation.....	5
c. Time.....	10
d. Inflection.....	5
e. Tone.....	10
f. Force.....	5
g. Musical properties.....	10
2. Physical action.....	20
a. Bearing.....	5
b. Attitude.....	3
c. Gesture.....	12
II. Personal Judgment:	
In all that pertains to manifestations of purpose.....	25
Totals.....	100

Just what points should appear on such a score-card doubtless will occasion differences of opinion. This one is intended to be suggestive and helpful to students when called upon to criticize the platform work of their classmates. The use of this card will not only insure a fair degree of accuracy in judgment, but it will afford excellent practice to the student-critic in reviewing frequently the essential factors of public speaking of which he has made a study. The values assigned in the first two columns are arbitrary.

Objections will doubtless be made to the relative weights assigned to the points to be scored. These may be changed to suit the judgment of the individual critics; and, until there is a definite fixation of content and weight by some widely recognized oratorical association, score-cards like this will be variable and must continue to be merely the result of personal judgment.

CADET OFFICERS PROMOTED.

Captain Boice Announced Several Advancements Last Wednesday Night.

Captain Charles H. Boice, commandant of cadets, has announced the following promotions: Cadet Captain John E. Jenkins to be cadet major of the first battalion; Cadet Captain H. D. O'Brien to be cadet major of the second battalion; Cadet H. W. McFadden to be captain and adjutant; Cadet F. G. Campbell to be cadet captain, Company A.

These promotions follow the resignations of T. E. Nafziger, major of the first battalion, and Roscoe Branson, major of the second battalion.

Rookies Working Smoothly.

Setting-up exercises are to be taught to the "rookie" class this week. The rookie class drills regularly in the armory. At present six officers are kept busy drilling the green ones. But the rookie company is getting better every day and will soon drill as smoothly as the older companies.

THE KANSAS INDUSTRIALIST

Issued weekly during the college year by the Kansas State Agricultural College, Manhattan, Kansas.

PRES. H. J. WATERS Editor-in-chief
PROF. C. J. DILLON Managing Editor
DR. J. D. WALTERS Local Editor

Except for contributions from officers of the college or members of the faculty, the articles in THE KANSAS INDUSTRIALIST are written by students in the department of industrial journalism, under the direction of Prof. Charles Dillon.

The typesetting and other mechanical work is by students in the school of printing, of which J. D. Rickman is superintendent. Both these departments are in Kedzie Hall.

Newspapers and other publications are invited to use the contents of THE KANSAS INDUSTRIALIST freely, with credit.

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SATURDAY, JANUARY 28, 1911.

THE WIFE'S SHARE.

"My wife," writes a correspondent, much as if referring to a buggy or a binder, "my wife says she has a right to so much every week. I'm not stingy; I give up what I can spare, but I object to paying for two new rugs and calling them Christmas presents."

Ordinarily this paper does not desire to go into the Chaperon business, but neither is it conscious of any especial aversion to it in an instance like this. Indeed it gives THE KANSAS INDUSTRIALIST a feeling of pleasure to declare, here, that in its opinion some men, very many men, should be taken into the alley, a really dark and fearsome alley, and well beaten with a thoroughly dry eucalyptus club—the hardest wood that comes to mind on short notice.

Of course your wife is entitled to a definite sum, you big gump, and the more she can get the better for you. Every woman has a right, in capital letters, to a definite amount every week or month, or whenever it is that you deceive some employer into paying you, and that money should be put into the bank for her or handed to her—to save bookkeeping, for she will check it out at once—and she should never have to ask for it. Why should she? The chances are she gave up a good home or a job to be your wife—it's usually some sensible, industrious creature who gets tied up with a tight wad, as they are called in Sylvia.

Every little while the English language is enriched by the addition of some strangely expressive word for which the world has waited. Tight wad is such a word and it has come into the kingdom to serve a fine purpose. Better than Miser or Closefist or Stingy Bill it describes the penurious bears of the households in which faithful women cringe while humoring the ill-natured, parsimonious lords who make gay about "buying me a present with my own money" or make life more than usually burdensome by reminding others at every meal of the high cost of living. The correspondent here referred to belongs to all these classes, evidently. What his family needs is a receiver, legally appointed, to give the wife her wages, the wages of faithful service, the highest service any man can receive in this world. And he ought to be mighty glad he has good meals, properly prepared, and a well-kept home—all of which he grudgingly admits in his misspelled letter. You just bet your wife is entitled to a share. It ought to be doubled.

THE CHEERFUL BANKER.

About the cheekiest thing out is the news from Illinois that the bankers are to help the farmers to save the soil and make life more attractive in the country. What do you think of that? What banker, may it please the court, knows a thing, one single, solitary, glimmering thing, in his snug complacency, that will add one iota of brightness to the farmer's rural existence? How many bankers, anywhere, from Bangor, Maine, to Oregon, would last thirty days if the farmers did not help them? How soon would you hear about "the country currency being held back?" What do

these bankers know, behind their mahogany and imitation onyx, about soil fertility? Where did they learn to make rural life attractive?

The place to set about making farm life better and nobler and more worth living is on the farm—not in the banks. There isn't a banker on earth, or anyone else safely sheltered in his own smooth and even existence in a city, who has the key to this problem. The Agricultural college is applying the best leaven possible by teaching boys and girls—and the old folks—to cultivate the land in modern ways; to conserve its fertility by rotating crops; to improve rural conditions by having better churches and schools; to organize clubs and institutes; to buy modern machinery and take care of it, because these are the things that will make life in the country better. Not preaching in the city.

You have to hand it to the banker when it comes to patting the farmer on the back with the real, downright "con talk." Every little while he grows anxious about his farmers and sends them pretty calendars and notices that their notes—at 8 or 10 per cent—are about due, which is all very proper and businesslike. But as to soil fertility and the happy life, no banker this side of the pearly gates of heaven can tell the farmers a thing. And those on the other side have kept silent.

THE WORTH OF IT.

Measured by a utility standard, the only qualification by which any institution merits support is its efficiency. If an institution is doing this, that efficiency must be increased to meet the demands or it will fail.

Life problems which demand solving are becoming more and more complex and the number of persons honestly and sincerely trying to solve them is rapidly increasing. This is shown by the increasing number of students in home-study clubs, schools, and colleges.

The institution of most value to the people is the one which aids in solving the greatest number of problems in the most economic way. Let it be remembered, however, that cheapness is seldom economy.

Food, clothing and shelter, art, music and literature, all necessities of the complete life and home, must be produced by some form of industry, hence the need of a well-equipped industrial school in which young men and women may acquire skill in the work that is to measure their real value as citizens.

The Kansas State Agricultural College with its fourteen courses and extension department is doing just the things suggested here. Those most familiar with the work of the departments are willing that any fair test be applied. Furthermore, they feel confident that the only unfavorable condition such a test could reveal would be the result of the lack of adequate funds for carrying on the high quality of work demanded by the young people of Kansas. L. G. F.

HUMAN TREATMENT FOR HUMANS.

Try to put 700 persons in a space intended for fewer than 300 and something unpleasant is certain to happen. Conditions will be unhealthful, insanitary, and distinctly uncomfortable. A wise breeder of live stock wouldn't permit such overcrowding of brute creation. How about the students in the Kansas State Agricultural College?

A building adapted to the needs of the departments of physics and electrical engineering is much needed. These departments are now quartered in the general science building, which is overrun with students. The department of chemistry, also in this building, has in attendance upon classes and in laboratory exercises nearly a thousand students. They have laboratory room for 276 students, and there are taking laboratory work in this space more than 700 students.

The experiment station laboratories in soil fertility, stock feeding, etc., have been taken over mainly to accommodate students, and these important phases of investigation are greatly hampered.

In physics, there is room for 216 students, by working six days a week.

There were enrolled in this subject last spring nearly 600 students. At present there are 500.

The regents have asked for a physics building and its equipment. This will cost \$45,000 in 1911-'12 and \$45,000 in 1912 and '13.

WHO IS JOHN DAVEY?

"Life or Death?" is the gloomy title of two-columns, solid, received by THE KANSAS INDUSTRIALIST, this week, for publication. John Davey, of Ohio, is the author. The first human impulse was to throw the press letter into the basket, but one line attracted attention—the first line: "It is June, 1710!" Obviously this was either a deliberate falsehood or a typographical error. Neither—it was John Davey's way of beginning an appeal to the public to save the birds and the trees!

"It is June, 1710," says John, and the reader skips down one column hoping to get into modern times. "Two hundred years have elapsed," Mr. Davey confides, "and here we are at Augusta, Maine."

Think of traveling 200 years and landing in Augusta, Maine! At this rate all the birds will be dead and the trees burned or petrified by the time the "Bird and Tree Band of America" arrives in Chicago. John Davey is a poor press agent. His literature resembles the output of a patent medicine house and it reads like the annual report of the board of charities.

HOW THE COLLEGE HELPS.

For the first time in history, such fundamental problems as the world's food supply, the conservation of natural resources, and the revitalizing of the country church, the rural school, and indeed country life, are being made the special problems of the agricultural college.

The farmer no longer attempts to work out his own difficult problems, but refers them to the experiment station for solution. Thousands of farmers cannot avail themselves of the opportunities the college offers by studying at the college, but they rely upon the farmers' institutes, the demonstration farms, the instruction trains, and the reading courses, for definite instruction and guidance. The losses from several of the animal diseases, which formerly amounted to millions of dollars annually, are now being practically prevented by the serums produced at the agricultural college. These things are worth thinking about.

THE VALUE OF TOP SOIL.

An Explanation Showing Why Washed-Over Land Often Fails to Produce.

You remember, perhaps, that after the creek "went on a tear," one spring about corn-planting time, and washed the top soil off part of the corn field, that the subsoil that remained produced very poor crops. Ever wonder why? There are some very definite scientific reasons to explain why top soil is more productive than subsoil. One of the principal reasons is the increased amount of humus—decaying vegetable matter—and the large number of minute soil organisms found in the top soil. Where there is an abundance of humus it will, like charity, cover a multitude of sins.

And then the subsoil is in some respects like the cellar of a house. All sorts of dark and evil things may abide there. Chemical compounds are found in the subsoil that cannot exist in the top soil where air can reach them. The substance which chemists call ferris carbonate is one of the most abundant of these substances.

The subsoil contains, also, a substance with a long name—hydrated aluminum silicate—which is not so abundant but has mighty evil-producing powers. This it is that makes a hardpan soil, after plowing when wet, resemble an Egyptian brick field. The substance has small-sized grains that tend to fasten the soil together. All that soil chemists have been able to determine about the size of these silicate grains is, that they are smaller than 1/1000 of an inch in diameter.

It is what we think and what we do that makes us what we are.—*Fra Elbertus.*

A Golden Text.

Through thee will we push down our enemies: through thy name will we tread them under that rise up against us.—Psalm 44:5.

FIX UP THE HOME.

A Few Suggestions that May Worry Father—from a Student.

The home should be the heart of the farm and as such it should receive the greatest attention. These long winter evenings are just the time to get the family around the fireside and plan improvements for the old place. Always be practicable in planning and when the plans are made see to it that they are carried out. Practicable improvements are not pipe dreams.

The health of the family depends largely on the water used, so be sure the source of supply is sanitary. A water-works system operated by a small engine is one of the essential home improvements. And, by the way, a small gas engine doesn't cost much and it will do all sorts of work.

Every farmer should see to it that the house is well lighted by some convenient system—acetylene makes the most convenient and practical system. Discard the old base-burner and put in a hot-air or hot-water heating system. Then build a good, concrete basement under the whole house, if there isn't one already. A basement is a housekeeper's pride.

Plenty of sleeping room for the boys and girls is necessary. Don't coop them up in small rooms. If you do they will want to get out in the big world.

In making improvements use common sense with a bit of enthusiasm. Don't forget that every improvement, if practicable, is a "gilt-edged investment." The interest is your increased joy of living.

A STUDENT'S VIEW-POINT.

What One Boy Thinks of the College and Its Important Work.

Since July 2, 1862, when President Lincoln signed what is known as the "Land Grant Act," and since 1863, when the agricultural college, then under a different name, was established here, it has been doing much for development, especially along agricultural and mechanical lines, for the young people of the state.

The college offers twelve four-year courses and eighteen subjects taught by correspondence.

The Kansas State Agricultural College is valuable to Kansas in many ways: It educates the young people of the state along advanced agricultural lines, which are to-day essential to successful farming. It educates Kansas girls in domestic science and art—a valuable asset now and in the future. Its graduates go out into the world, proficient in their chosen line, a credit to the institution, a credit to the state. The college enlightens the Kansas farmer on different phases of stock breeding, poultry breeding, and the allied kindred subjects that are practicable and valuable to the Kansas farmer.

Another way in which the Kansas State Agricultural College is doing a decided good to Kansas is in the establishing of institutes over the state. The experiment station at the college is a factor in helping Kansas, and carries on extensive work in this line beneficial to student and farmer.

CROPS AND GOOD ROADS.

Civic Organizations and Farmers are Co-operating for College Lectures.

Commercial clubs and other civic organizations are evincing a disposition to coöperate with farmers in improvements of many kinds, particularly roads. At Kingman special arrangements have been made for a meeting February 2 with lectures on the care of corn as a fodder, by George S. Hine, and road building, by W. S. Gearhart, of the agricultural college. The farmers and townspeople in that district are to spend about \$2,000 immediately, as a start in road building.

The Light That Failed.

The winter wind across the campus blows; Snow-laden clouds shut in the dying day. Adown the dreary hill I gaze, where goes A shivering student on his homeward way. "Some laggard at his lessons," thus I muse. A hapless duncie to be in such a plight That he must needs, belated, linger here To thumb neglected books 'till fall of night. "O, golden hours we waste when life is young! O, opportunities we miss, the friends we scoff! The careless words that ripple from the tongue—" Dad bling that engineer, the current's off.

What beauty might have clothed that final line!

What logic deep died in the gloomy night! The world might be a better place to-day Had not the engineer turned off the light.

—C. D.

SUNFLOWERS.

Kackley, Kansas, must be a fine place for laying hens.

With a chafing-dish and a coffee percolator a college girl can defy the world.

"One who knows" and "Veritas" are regular contributors to the Wichita *Darklantern*.

Palermo items: "Our skating pond is kept hot these days when there is any ice." Strange.

Dr. C. M. Sheldon, of Topeka, had the grip last week. Nine-tenths of the population is following "In His Steps."

"Senator Reed may not be allowed to take his seat," says the *Capital*. Well, Reed has had to stand for lots of things.

The Lawrence *World* says some men are always kicking on their lot. They certainly have a right to kick there, if anywhere.

Someone has introduced a bill at Topeka "to stop bad checks," according to the *Capital*. What's needed is a law to start a few good ones.

THE KANSAS INDUSTRIALIST points with pride to the fact that it carries nothing about the libel suit of a certain periodical against a certain iron filings food company.

Now it is announced that E. W. Howe's play is to be seen first at the Majestic in Topeka, January 30. Is this "trying it on the dog" before buying a theater on Broadway?

The *Wathena Republican* had ten items last week from Happy Ridge. Six of these were about the Marolds, Christ, Calvin, George, Lizzie, Agnes, Lawrence, and C. A. Come again.

Unanswerable argument by a farm girl: It's all very fine to talk of having company; but I haven't seen any machine that will prepare and cook and serve the big dinner that the whole hungry bunch expects.

Many weekly papers dated January 12 carried the college announcement that the state institute would meet December 26. Unless these editors actually need something to fill up they may "throw in" that item. The meeting has adjourned.

With gowns reaching "at least" to the patella, it should be proper to require sleeves to cover the humerus; basket hats should not go below the proboscis, and, at parties, the V shape should not involve the lumbar regions. This will be about all.

Feel all out of sorts? Tired, blue, irritable—go ahead and read, this isn't what you think it is—nervous, back lame and achy? Don't feel like working? You need a day in the country close to nature and a bucksaw and three square meals.

"The Kissing Girl" was playing to a full house in Manhattan last week while the Kansas City papers were telling the public that its "first western appearance" would be in that city in a few days. Also, it had been seen in Topeka, and, for all anyone knows to the contrary, in Iola and Emporia.

"They ain't nothin' to thet advice in *The Star*, mother, about 'How to Fall with Comfort,'" said Bill Silage, coming in from the milking. "Nup; I tried it. Started to slip on the back porch jest now; stuck my hands forrid 'as if to seize something' jest as *The Star* says, and hit thet pan of milk on the shelf. Come down with a noise like a calf makes when you kick it under the back. They ain't nothin' to thet paper talk, mother," and Bill prepared to pour the milk out of one boot.

LOCAL NOTES.

E. H. Webster, dean of agriculture, went to Topeka Tuesday.

Eddie Munsel, the famous guard on the '04 football team, was a recent college visitor.

The final preliminaries for the inter-collegiate debates will be held next Monday night.

Kirk W. Stouder, D. V. M., assistant professor of veterinary medicine, is in Kansas City on business.

A. R. Losh, assistant highway engineer, attended the meeting of the State Engineers' Association at Topeka last week.

Miss Annette Leonard, assistant in the English department, was absent from college Tuesday because of the illness of her mother and sister.

Dr. F. T. Bailey, pastor of the Plymouth Congregational Church of Denver, Colorado, gave an interesting address in the student assembly Wednesday.

A new \$80,000 Y. M. C. A. building has just been completed in Pittsburg, Kansas. The annual state convention of the Y. M. C. A. will be held there from February 16 to 19. The Manhattan association will send a delegation.

A faculty committee, of which J. O. Hamilton, professor of physics, is chairman, is seeking to regulate the social life of the several college fraternities and sororities. The committee is receiving the hearty support of the secret societies.

E. L. Holton, professor of rural education, and H. T. Nielsen, a graduate of the college, are covering a three-weeks' farmers' institute trip in the western part of the state. Prof. Holton lectures on "The Rural School" and Mr. Nielsen on "Western Forage Crops."

P. E. Crabtree and Frances L. Brown will close a two-weeks' institute lecture circuit to-day at Rossville, Westmoreland, Centralia and Horton are among the towns on the circuit. "Growing Horses for Farm and Market" is the subject of the talks by Mr. Crabtree. Miss Brown lectures on "The Human Ration."

J. T. Willard, dean of science, and R. J. Barnett, assistant professor of mathematics, who are the schedule committee of the college faculty, will begin work on the spring schedule next week. Such a schedule requires 150 or 200 hours of work, and one change or mistake means considerable extra work.

J. E. Kammeyer, professor of economics, spoke in chapel Tuesday morning. His subject was: "The Line and Staff in Business." The line he characterized as made up of routine workers. The staff is composed of trained specialists. It is the duty of the colleges to produce the specialists.

H. B. Walker and George S. Hine, of the Kansas State Agricultural College, are telling the farmers of northeast Kansas how to care for milk and water on the farm. Mr. Hine is lecturing on "Farm Dairying" and Mr. Walker on "Farm Drainage." This circuit of farm institutes includes Doniphan, Brown, Nemaha and Marshall counties.

ALUMNI NOTES.

Miss Minnie Cowell, '88, is now a nurse in Egypt.

Jens Nygard, '05, was a visitor at the college recently.

G. I. Thatcher, E. E. '10, is now living at Mecklenburg, Pennsylvania.

George Moffat, '08, is now working in the shipyards at Seattle, Washington.

Donald Foote, '09, is working for the Light and Power Company, Aguilar, Colorado.

Ward Woody, '10, is teaching in the Manual Training High School at Creston, Iowa.

H. A. Burt, '05, has moved temporarily from Denver, Colorado, to Leadville. Mr. Burt is an electrical engineer.

M. F. Ahearn met Clarence White, '05, at the recent Good Roads meeting, in Wichita.

Miss Margaret Haggart, '05, is an instructor in Johns Hopkins University, Baltimore.

Chas. A. Scott, '01, and Mrs. Scott announce the arrival of Sarah Elizabeth Scott, January 13.

W. J. Burtis, '87, state representative from Wilson county, is a member of the house committee on agriculture.

Harry Bainer, '00, is an agricultural demonstrator for the Santa Fé railroad. His headquarters is in Amarillo, Texas.

D. E. Lewis, '09, is a contributing editor to the magazine, *Intensive Farming*. A recent issue contains an interesting article on soils by Mr. Lewis.

Grover C. Kahl, E. E. '07, is working for the General Electric Company, at Schenectady, New York. He holds a responsible position and is doing good work.

Earl Cooley, '07, who has been in Tacoma, Washington, installing equipment for the Automatic Telephone Company, of Chicago, has been transferred to Great Bend, Indiana.

T. F. White, '05, spent several days at the college this week getting agents to sell stereopticon views. He reports a T. F., Jr., in the family. Mr. White is studying law at Austin, Texas.

Alson J. Cowles, E. E. '07, died of typhoid in Milwaukee, Wisconsin, January 11. Mr. Cowles was at the head of one of the departments of the Allis-Chalmers Electrical Company with headquarters at Milwaukee. He was buried at Eldorado, Kansas, January 15.

Miss Cora Thackrey, '98, writes to Dr. J. D. Walters from Simeon, Nebraska, that she was elected county superintendent of Cherry county, Nebraska, at the November election, and will have to take care of 150 school districts for the coming two years. Her sister, Harriet Thackrey Reece, '98, is living on a cattle ranch about 25 miles south of Valentine, the county seat of Cherry county. The Reeces have a fine and well-improved stock ranch.

REPORT YOUR FRUIT PLANS.

A Blank Sent Out Upon Which Orchard Information is Requested.

Blanks have been sent out by the extension department of the Kansas State Agricultural College upon which the farmers are requested to report their proposed fruit plantings for the coming spring. The information desired includes the kind of soil, distance from railroad, age of present orchard, number of trees and variety, and the number and variety of the proposed plantings. The college will furnish plans and suggestions for orchards free of charge. If a visit is desired, actual traveling expenses will be required. These trips often can be made in circuits if applications are made early. However, a seven-dollar trip may be worth many hundred dollars to an orchardist. The experts also inspect old orchards and give advice as to pruning and other treatment of the trees.

Hobson's Choice.

When the waitress says, "Roast beef, roast pork. Roast beef all gone," you take roast pork and say it is a case of Hobson's choice. That is just what it is, but Richard Pearson Hobson did not originate the expression. It was coined, in fact, while our Pilgrim Fathers were plowing potatoes around Plymouth Rock.

The particular Hobson who is responsible for this expression is one Tobias Hobson, who ran a livery stable in Cambridge in the early years of the seventeenth century. He was one of the earliest apostles of the Square Deal. When a man entered his stable and asked for a horse he took him down the row of stalls and gave him his choice of the animal he would ride; but he always insisted on his taking the one that happened to be nearest the door, declaring that that gave each man and each horse a fair chance in the long run. This practice gave rise to the expression, "Hobson's choice," which is no choice at all.

BOOKS A STUDENT READS.

MORE THAN A 5-FOOT SHELF, PERHAPS, BUT ENTERTAINING.

From Sentimental Tommy to the Chemistry of Dairying is a Literary Leap Worth While, but the Boy Enjoys It.

When you buy a new book for the family library, choose one that you will be sure to read a second time. Remember it is cheaper to borrow modern slush than it is to buy it outright. Of course, you have Dickens; somehow he always seems in sympathy with you and never resents having his pages stuffed full of pressed fern leaves, or sprinkled here and there with tears. But Barrie is better.

When the hogs get the cholera or you smash your finger while hammering a nail, read a little of "Sentimental Tommy." Occasionally, when you feel quite cynical and thoroughly elated over your own peculiar estimate of human nature, it's good to get down "Vanity Fair" and grin with Thackeray over brilliant Becky Sharp. It's well to have Mark Twain just to be patriotic, and, besides, "Tom Sawyer" will prove to your youngster that, all thrashings to the contrary, he has a chance to get to heaven after all.

THE REVIVAL OF SHE.

It's a little easier to wash the dishes if your mind is away off somewhere in Central Asia; so, even if grandma does hold up her hands in horror, you might add Haggard's "She" to the collection. In spite of all to the contrary, Poe is the best writer to go to bed with; for, even if the chairs do turn into walking skeletons as soon as the light is out, at least you forget that it probably will be five below zero when you crawl out in the morning.

A good part of the library should be poetry. Hood, Moore, Burns, Tennyson, Longfellow and Kipling for actual enjoyment. Milton and Wordsworth, Keats and Shelly will look well on the top shelf. Browning adds quite an air of distinction to the center table and serves well to cover up the worsted doily your sister keeps on exhibition.

DEAR, OLD IBSEN.

In the realm of drama, Shakespeare should almost suffice, although it is considered quite the thing to have thumb-marked copies of Ibsen, Pinero and Shaw lying around in view. To cultivate a taste for essays and biographies you would better begin with Samuel Pepys' Diary. It isn't hard to take. Boswell's "Life of Johnson" is sure to follow, and anything from Macaulay is palatable. Carlisle should be represented in "Heroes and Hero Worship," and if more is needed to fill the shelf De Quincey might be added.

Every student in the Kansas State Agricultural College should have an industrial library and so should every farmer. The student has an excuse for not owning one, but the farmer has none. Every man should choose according to his needs. But here are a few books that are indispensable to any farmer: "How to Keep Farm Accounts," by Stiner; "Principles of Soil Fertility," by Divian; "Soils," by Burkett; Henry's, "Feeds and Feeding;" "Animal Breeding," by Shaw; "Farm Machinery and Farm Motors," by Davidson and Chase; "Popular Fruit Growing," by Green; "Principles of Vegetable Gardening," by Bailey; Wing's, "Milk and Its Products," and "Dairy Chemistry," by Snyder.

HORSE DAY, FEBRUARY 11.

All the Institutes Have Been Asked to Discuss Better Stock.

To arouse increased interest in the breeding of horses, the extension department of the Kansas State Agricultural College has asked more than 315 institutes of Kansas to set aside February 11 as horse day.

"Neither the bicycle nor the motorcar has put the horse out of business on the farm or in the town," says J. H. Miller, superintendent of the extension department, in a letter to the farmers' institutes. "With the greater devel-

opment of industries and the increasing necessity for better farming, the big horse is in greater demand than ever. The college is working in several ways to encourage the big-horse business. It is trying to eliminate entirely from the state the scrub stallion, and through the farmers' institutes is urging more care in breeding, and finally to community breeding—whole neighborhood, township or county keeping to one breed."

The subjects suggested for discussion by the farmers February 11 are these:

1. What constitutes a good brood mare?
2. Does "any kind" of a colt pay?
3. How will four 1300-pound mares compare with four geldings of same weight as to amount of work in twelve months?
4. Problems in breeding.
5. The care of the brood mare.
6. Relation of mare owner to stallion owner.
7. General.

GROCERY BILL \$8.40.

For \$1.20 a Day You Can Live on These Good Things.

This week's menu calls for meat. And the bid is raised 10 cents a day. When you use this menu your "three squares a day" will cost you \$1.20. You will spend \$8.40 a week on your table.

BREAKFAST	
Cracked Wheat	Muffins
Apple Sauce	
Coffee	
DINNER	
Braised Flank Steak	Boiled Onions
Riced Potatoes	Cottage Pudding with Vanilla Sauce
Coffee	
SUPPER	
Scalloped Cheese	Honey
Baking Powder Biscuit	Tea
Peach Sauce	

MAKING A POLE STACKER.

A Substitute for the Factory-Made Article—Cost \$12.

You don't stack enough hay to afford to own a hay-stacker? Perhaps you cannot afford to own an expensive factory-made machine with enough lumber in it to stock a lumber-yard. But you can make a pole stacker that is cheap and efficient. And it will save a lot of back-breaking work.

The pole should be at least thirty feet long and five inches across at the top. Revolve this on a block of wood which has been placed a few inches in the earth. The three guy ropes for the pole should be about fifty feet long. An arm twelve feet long, the hay fork and the fork rope complete the outfit. This will cost about \$12, and for that amount an immense amount of labor may be saved.

And the work may be done so that the hay will keep better. Stacks 25 feet high that hold ten or twelve tons of hay may be built, and less hay will spoil in the tops and bottoms. But even more important is the labor it will save. Pitching hay in August with the temperature about one hundred degrees from the starting place is hard work. The "rope horse" can pull that hay up in the air much easier than a man.

KEEP OFF THE GRASS.

Rise Early and You Won't Have to Make Unpleasant Paths.

This is a progressive age, a time of hustle and hurry in which the swiftest wins; but just the same, there is small necessity for students making paths across the campus. The horticultural department and the custodian have posted signs warning students, but many, apparently, do not believe in signs. The state has spent much money for concrete walks. They were laid to be walked upon. Students are expected to use them. No habit is quite so "jay" as that of taking to the woods or cutting across lots several times a day to save a few hundred yards' tramp. The authorities expect students and others to abandon these bridle paths.

GERMANS WERE WISE.

HOW THEY LEARNED, LONG AGO, THE VALUE OF PHOSPHORUS.

Exposure to Weather Detracted From Barn-yard Fertilizer—When This Became Certain a New Era of Agricultural Development Began.

When Dr. C. E. Thorne, of the Ohio experiment station, was at the college recently he told this story:

Probably no farmers in this country have won a more honorable reputation as thoroughgoing farmers than the Pennsylvania Germans—a sturdy, honest class of people, who have spread over a large part of Pennsylvania, and much of Ohio and Indiana. Wherever they have gone there has been more than the average care in the saving of farmyard manure. The Pennsylvania farmer believed that this was the only thing necessary, unless it be lime, for the complete maintenance of the fertility of the soil. These people were the original settlers of Wayne county, Ohio, in which the state experiment station is situated. They brought to that county their habits of thrift and thoroughgoing agriculture. Wayne county was noted a quarter of a century ago for the finest farms and farm improvements of any county in the state.

VALUE WAS WASTED.

The experiment station began work in that county eighteen years ago, laying out an extensive series of experiments with fertilizers and manures. It was soon discovered that phosphorus was having a marked effect upon the crops, and that the effect from manure was disappointingly small. The experts were following the prevailing practice of letting the manure lie in the open barn-yard until ready for use and then applying it to corn or to wheat. Stopping to reason upon the cause for the unsatisfactory results obtained, they saw that the system of agriculture which had prevailed in the county had been such as to exhaust the phosphorus in the soil, for, from its first settlement Wayne county had been a large producer of wheat, producing far more than its people could consume. The Pennsylvania farmer was also a keeper of live stock for the manure. During the first half century of agriculture in the county, live stock production was a conspicuous feature of its agriculture. Before the advent of the railroad cattle were driven across the mountains to Philadelphia. These cattle were carrying away a steady stream of phosphorus, and the wheat was carrying away another.

AS TO PHOSPHORUS.

It is evident that growing animals must build up in their framework a large proportion of the phosphorus of their food, and hence the manure produced must be relatively deficient in this element. A series of experiments was started in 1897 to learn the effect on manure of exposing it in open barn-yards; also, the possible effect of reinforcing the manure with phosphorus. These experiments proved that manure taken directly from the stable to the field has produced a very much larger increase than that allowed to lie in the barn-yard for three or four months before going to the field, and also that the manure which has been reinforced with phosphatic materials has produced a much greater crop than that which has not been so reinforced. It was learned from this test, also, that manure is not the complete fertilizer which the farmer formerly supposed it to be, and that it cannot be such a fertilizer, because of necessity it must, to a greater or less extent, be deficient in phosphorus.

And Bright in the East.

W. A. McKeever, professor of philosophy, is in New York City this week attending the New York Child Conference, to which he is to speak. McKeever's classes are being taught by J. H. Miller, Dr. Arthur Holt, pastor the Congregational Church, and W. H. Andrews.

NEARLY HOTBED TIME.

WHY NOT BE FIRST WITH YOUR VEGETABLES NEXT SPRING?

Here Are a Few Simple Directions for Making the Pit and Watching the Temperature—Don't Forget Extra Covering.

Why not try a hotbed this year? See if you cannot be ahead of every one in the block with the first vegetables. Nothing mysterious about a hotbed. Takes a little labor at the start and a bit of watching afterward, but the returns justify everything you do. It's time now to be talking about these things.

Your hotbed should be on the south side of a building or fence, on well-drained ground. The protection on the north is to keep the cold winds from blowing against the hotbed and lowering the temperature. Dig a pit a little larger than your hotbed frame and from one and one-half to two feet deep. If the bed is permanent, the walls of the pit should be lined with brick, stone or concrete. From one to two feet of manure should be put into this pit, the amount depending upon the time of the year the bed is made. The earlier the bed is built, the more manure it takes. Wet thoroughly and tramp firmly. Unless the manure is well packed it will settle and make an uneven surface.

HOW TO TREAT IT.

The manure should be good, rich, horse manure. To have it in the best condition when put into the bed it should be placed in long, narrow ricks, and turned two or three times before using. This gives an even mixture and makes the soil in the hotbed of a more even temperature.

Rest the frame on the top of the manure in the pit, and fill in around the bed with manure and earth. Place from four to seven inches of good, rich soil inside the frame, and the bed is made, ready to cover to allow the soil to heat.

The frame should be six feet wide, because this is the length of the sash. An average bed would be 12 feet, or four sashes, long. The front side of the bed should be six or eight inches high, while the back should be about a foot higher. If the bed is permanent, the frame should be made of two-inch stuff; otherwise, common boards will do. Glass sashes are preferable for a cover, although a hotbed made in the last part of March may be covered with muslin and give satisfaction. One advantage in muslin is that there is less danger of overheating the soil from the too rapid fermentation of the manure.

THE TIME TO BEGIN.

The temperature of the hotbed will be very high at first. Wait until it has fallen to nearly 75 degrees before planting the seed. A thermometer should be used for reading the temperature. Never let the temperature of the hotbed get above 90 degrees. Give the bed plenty of fresh air by raising the cover, and keep it moist. Do not wet it too much or you will burn out your manure too soon, which will prevent the full development of the plants.

When growing plants for transplanting, the hotbed should be made about the second or third week in February. If radishes and lettuce are to be grown in the bed and are not to be transplanted, the bed may be made the last part of January. All hotbeds, whether covered with glass or muslin, should have some extra covering of some kind for cold days or nights. Straw mats or old carpet do very well for this.

If you have no time to dig a pit, the manure may be put on top of the ground. The frame is then placed upon the manure and filled in as before. This method is not so satisfactory as digging a pit.

Hotbeds made in this way have been tried, both by the horticultural department of the Kansas State Agricultural College and by A. J. Nicholson, a practical gardener of Manhattan, and have always proved successful. Try one this year, but be careful not to burn the seeds at the start by overheating.

THROWING AWAY MONEY.

That's What Farmers Do Who Don't Understand Manure.

When buying commercial fertilizers you pay 20 cents a pound for nitrogen, 8 cents for phosphorus, and 6 cents for potassium. All three of these elements are necessary to the growth of crops. The supply of nitrogen, phosphorus and potassium must be maintained in the soil or it is impossible to grow a profitable crop.

The corn you gather contains a good deal of the nitrogen and phosphorus and potassium you put on the soil in the spring, so it will be necessary to put on more fertilizer next spring when you get ready again to plant your crop. Corn robs the soil more than any other crop. It is one fertilizer after another for that grain if you grow it.

But did you ever wonder what became of the nitrogen in the corn when you fed it to the horses and cattle? A portion of it is absorbed and becomes a part of their systems, but the remainder is voided and lost unless the farmer understands his business. It is estimated that the manure from a 1,000-pound horse in one year contains 125.20 pounds of nitrogen, 20.90 pounds of phosphorus, and 35.90 pounds of potassium. At the market price of commercial fertilizers the manure from one horse is worth \$28.86. By a similar estimate the manure from a cow is worth \$40.49, annually.

Besides these three elements the manure contains other substances that are essential to plant growth. It contains a large amount of humus which is necessary in maintaining the proper texture of the soil. It is impossible to supply this humus by using commercial fertilizers.

If you have six work horses on your farm and use care in saving the manure it will be worth more than \$175 a year. The manure from a herd of 25 cattle is worth \$1,012, annually. And yet some people dump it into the creek to escape the work of hauling it to the field.

DOES IT REDUCE THE MILK?

Alfalfa Meal Is Not Gaining Popularity as a Dairy Feed.

Grinding alfalfa hay into meal as a feed for horses, cattle or hogs is a questionable practice. It is certain that grinding adds nothing to the food value but it does add considerably to the cost of the feed. In view of the great palatability of well-cured alfalfa hay, and the satisfaction with which it is eaten, the stockman cannot afford the extra expense of grinding. Bulletin 155 of the Kansas experiment station says:

"Within the last year alfalfa meal has gained a great deal of prominence as a feed for dairy cows. While we have not been able to carry out carefully conducted feeding experiments with this product of the alfalfa mill, we do not feel it will prove to be so valuable for feeding dairy cows as for some other class of live stock. The dairy cow not only has room for, but needs a large amount of roughage in her ration; and in view of the difference in price between the meal and the hay, which, by the way, must be practically the same in feeding value, we do not think that it is economical to purchase the meal except in special cases to be used in the place of bran for lightening up a heavy grain ration. We believe the cow can do this grinding cheaper and to better advantage than the mill.

"The Pennsylvania experiment station, as a result of experiments conducted in feeding alfalfa meal, reports that the results of this test do not warrant the recommendation of alfalfa meal as a substitute for wheat bran for dairy cows at the present market prices."

The experiments conducted there showed a loss of about 5 per cent in the milk flow when alfalfa meal was substituted for wheat bran. The Vermont station found a loss of from 3 to 6 per cent in the milk flow when alfalfa meal was substituted for an equal weight of wheat bran. This reduction in milk flow probably is due to the difference in the amount of digestible nutrients in the two feeds.

MOW THE FENCE ROWS.

THERE WILL BE FEWER WEEDS IF FARMERS OBEY THIS LAW.

This, in Effect, is the Advice Albert Dickens Gives an Inquisitive Correspondent Whose Letter Indicates an Earnestness Rarely Encountered.

A letter of much length and more circumlocution has been received by Albert Dickens, professor of horticulture, asking these questions about weed seeds. THE KANSAS INDUSTRIALIST regrets that space forbids printing the whole exciting correspondence:

1. How deep in the soil are the seeds of weeds? I have staked my hope of immortal glory on the supposition that the majority of weed seeds are only about two inches from the surface. Is that so? For the love of glory I beg of you to be careful in your answer to this question; for if I am wrong here the world will have to wait a thousand years or so before another comes to the aid of aching backs. Kindly give authority.

2. Will the seeds of weeds float in fresh water?

3. I assume that one acre can be scraped two inches deep, the soil elevated, fined, and sifted for about \$15. Is that so?

4. Kindly give me the history of this matter. I have never read one single word of men or angels on the matter. I want to know if any one has done conclusive work in battle against the seeds of weeds.—*The Secure of Weeds.*

Here are the answers Prof. Dickens sent:

First: The majority of last year's crop of weed seeds are most certainly not covered to exceed two inches. In the cultivation of past seasons, very many weed seeds have doubtless been buried so deeply that they could not germinate, but this year's plowing will certainly bring many of these seeds to the surface, as it is well known that many weed seeds retain their vitality for several seasons.

Second: The seeds of many weeds will float in fresh water. This is also true of the undecomposed particles of fertilizer, roots and partially decayed humus which form an important part of the soil.

Third: I must submit your questions concerning the cost of scraping an acre to the department of mechanical engineering, but I am certain that in the process you will find difficulty in separating the weed seeds from other important soil constituents.

Fourth: You are doubtless aware that most of the cultivation is directed to the prevention of the growth of weeds by seeds. In the battle against weed seeds the regulation requiring the road weeds to be mowed is a great advance. The chief hope of the advocates of this movement is that the average farmer will turn down the inside of his fence row and mow that also. In this way a large proportion of the weed seeds will be destroyed.

ALBERT DICKENS.

THE FORESTER'S PARK WORK.

Fort Scott and Fredonia are Having Plans Made for Breathing Spots.

The forestry department has recently taken up two important projects in park work. One of these is the "Gunn Park," of Fort Scott, Kansas, containing 110 acres of natural timber. The work involves plans for laying out the park, the construction of drives and roads, the thinning out of undesirable trees, and the planting of desirable trees. A fund of \$10,000 is available for carrying out these plans during the coming year.

The other proposition is that of making a park plan for a 40-acre tract for the city of Fredonia. The land in this park is broken and rough and will require considerable work, but when finally completed will make one of the most beautiful and interesting parks in the state.

When you disparage the concern of which you are a part, you disparage yourself.—*Fra Elbertus.*

Kansas State Agricultural College

College of Agriculture and Mechanic Arts

COURSES OF STUDY

As organized at present, the Kansas State Agricultural College offers 39 definite courses of study. These are

Agricultural Group: Four-year courses in agronomy, in animal husbandry, in dairying, in horticulture, and in veterinary science. A two-year course in agriculture, two-year short winter courses in agriculture and in dairying. A one-year short winter course in dairy manufacture, a short course in testing dairy products, and a six-week summer course for teachers.

Mechanic Arts Group: Four-year courses in mechanical engineering, in electrical engineering, in civil engineering, in architecture, and in printing. One-year courses in foundry work and pattern making, in blacksmithing, in drafting and machine shop practice, and in boiler and engine operation. A summer course in manual training for teachers.

Home Economics: A four-year course in home economics, a six-month course in housekeeping, and a twenty-week course for teachers.

General Science: Fifteen different organized four-year courses in pure and applied science in mathematical, physical, biological, educational and economical lines.

ENTRANCE REQUIREMENTS

The College reaches down to the common school. It takes students as soon as they have completed the common-school course. Young people who enter the College with a common-school diploma, or who are able to take an examination in the subjects required for such diploma, may enter the sub-freshman class.

Students who have had two years' work in any accredited high school will be able to enter the Agricultural College in the freshman year of any of the courses, and will there receive not only instruction in the academic branches named, but will receive the laboratory drill in corn judging, stock judging, shop work, cooking, sewing, etc.

For catalogue or any information address

President H. J. Waters,

Manhattan,

Kansas

IS THE ROOM TOO SMALL?

CHOOSE PROPER WALL-PAPER, THEN, AND SO ENLARGE IT.

You Don't Really Make It Bigger, of Course, but It Looks Like It—Psychology of Decorations in the Home.

You can increase the size of a room by putting paper on its walls. Of course, you don't actually make it bigger—it just looks that way. By a similar method you can decrease it, if you know how to select the paper. Dress a tall man in striped clothes and he gains two inches in height, unless you measure him with a tape. Give him a suit of checks and he remains normal. Run the stripes around him and he becomes a shorter man. That is the psychology of wall-paper. Some women—and men—never learn the lesson, not in fifty years; but it is one of the studies a girl gets in the home economics work in the Kansas State Agricultural College—how to decorate the home, how to make things attractive and comfortable.

PLAIN EFFECTS POPULAR.

Just now the wall-paper designers are working toward "plain effects," light papers on the walls and stronger colors for borders and friezes. But no tendency is being shown to get away from the stripes or panels. Perhaps this is because the average home is small and the demand for more room can best be met by investing in paper that makes the owner think he is living in a more spacious home.

Light tints brighten and give size to a room that would seem stuffy if treated with a heavy paper. For that reason dealers are urging the use of light paper in the rooms most used—the first-floor rooms. If all are treated with the same paper, the rooms are brought into harmony and an apparent increase in size is made.

The paper chosen for the rooms, its design and color, and the manner it

is used on the walls, affect the senses of those who live confined by it. A dark, depressing room, eliminating all feeling of atmosphere, is to be guarded against. A flowery design carrying a big bouquet for every square foot makes Nature's beauties commonplace. The greatest beauty lies in simplicity, something which should gratify the man of limited means.

It has been urged that wall-paper is unhealthy. The bacteriologist asserts that a tightly papered wall is better than a rough, cracked one. The chemist says there is some danger in the coloring matter used, but this will be eliminated by necessary ventilation.

The Call of the Horn.

Faris Riley expects to go to Kansas City the fifteenth of this month to fit himself for the position of a chauffeur. —*Banner correspondence, Holton Signal.*

Riley's going to be a shuffer. Life here's getting tough and tougher. Riley's wearying of working on the farm. Thinks he'll go up to the city. Drive a car, and, more's the pity, learn the secrets of the pavements and their charm.

Honk—honk—when Riley knocks them down, Honk—honk—see the coppers frown. Pedestrians will scurry here and there. There will be no way of stopping. People when they start to flopping. When Mr. Faris Riley hits the town.

Dump the overalls and jacket. Get the pasteboard grip and pack it. You won't know him when you see your boy again.

He'll have shed his paper collars. And he may be coining dollars. As he proudly drives on Walnut, Grand or Main.

Honk—honk—down the street he goes, Honk—honk—a copper follows close; Riley's just been musing up a man. Broke his legs and both his jaws. Smashed the city's speeding laws. And he'll gladly hike for Holton if he can. —C. D.

A Stable Convenience.

Drive in a few spikes at the barn on which to hang the stable tools, as forks, broom, etc. Leather straps can be tacked on the ends of handles of such tools to hang them by. Accidents are often caused by leaving these tools lying around on the floors, and the stock are apt to step on them, now and then, and break a handle.—*The Farm Journal.*

They might also break a leg.

THE KANSAS INDUSTRIALIST

Volume 37

Kansas State Agricultural College, Manhattan, Saturday, February 4, 1911

Number 18

"FINE," SAID HAPGOOD.

A DOMESTIC SCIENCE LUNCHEON
"BETTER THAN DELMONICO
CAN SERVE."

The New York Editor Declared the Kansas Girls' Menu "Reached the Spot" of a Desk Worker—A Safe and Sane Meal.

The department of domestic science of the Kansas State Agricultural College has entertained some noted men at luncheon. Mrs. Mary P. Van Zile, the dean, has been complimented again and again by these visitors for the excellent service provided by the young women students. But it is hardly possible that any man ever gave more sincere proof of appreciation than did Norman Hapgood, editor of *Collier's Weekly*, a guest in Mrs. Van Zile's department one day last week. Mr. Hapgood is not demonstrative. He thinks deeply, studies much and writes forcefully, but even extraordinary things do not rouse him to lift his eyebrows or to speak vehemently. Therefore, when he leaned back after a satisfying luncheon, served without hitch or haste, and observed "better than anything Delmonico has," Mrs. Van Zile and President Waters and the other guests—and of course the girls—were delighted.

It was the sort of luncheon that men of Hapgood's type can enjoy. In the first place, the decorations, and the artistic little place cards, too, were particularly appropriate. In the center of the table was a bowl of corn, yellow and white, on the ears—not cooked corn, you know—and around the bowl was heaped millet 18 inches long from the test plots in the greenhouse. The place cards carried sunflower decorations; the egg salad was arranged on every plate in sunflower shape; the dessert, some light but mighty interesting concoction, was yellow and white like "floating island;" large sunflowers hung from the corners of the table; the bread was corn bread or Johnny Cake jems.

There wasn't a thing on the menu, except the oranges, the coffee and the pepper, that wasn't "Made in Kansas." It was cooked by the daughter of a Kansas farmer; the table was set and the meal served by the daughter of a Kansas farmer; the pork chops and the sweet potatoes and the corn and the butter, all were produced by Kansas farmers. A Kansas farmer's daughter washed the dishes—a fine, healthy, pink-cheeked, good-natured lot of girls, too, should any inquiries arise. "Well," said Norman Hapgood, sighing a sigh of satisfaction, "this was fine, better than anything I could get at Delmonico's. I'll never forget it." May his tribe increase.

THERE'S MORE THAN SMOKING.

Meat Curing Goes on for a Year or More—The Temperature.

It is a mistake to suppose the curing of meat finished with the smoking. It is just well begun. The warmer the place in which the meat is hung during the summer, the more rapidly the curing will go on. In the ordinary country meat house the temperature during the day is high. The hams are likely to reach their maximum quality for broiling and frying by June or July, but will not reach their maximum qualities for boiling and serving cold before the end of the summer, and as a rule not before time to kill hogs the next year. From this time on, the change is not important, but slight improvement goes on even for another year.

FOR CLEAN JOURNALISM.

C. W. Whitehair Gave the Students Advice That Was Important.

"One big, daily newspaper has a greater influence than a hundred preachers," said C. W. Whitehair,

speaking to the students of industrial journalism one morning recently. "The newspaper reaches, every day, hundreds of persons who will read what a man has to say but who will not go to hear him talk."

Mr. Whitehair urged the importance of integrity and fearless presentation of truth in newspaper work. He believed the newspaper to be the greatest factor in molding public opinion. The journalism of the future, he said, would depend upon the moral standard held by the young men now entering this field of work. "The journalist is the property of the public and can no more honorably betray the interests of the public than he could those of a private employer," Mr. Whitehair declared. He made a strong appeal to the boys to stand for clean

TO TEACH TEACHERS.

A SPRING AND SUMMER SCHOOL AT THE AGRICULTURAL COLLEGE.

Arrangements Made for a Term to Begin March 28 and End June 14; Another June 15 to July 27—Here's the Plans.

School-teachers who desire to know something about agriculture and how to educate their pupils in that study are to have a summer school this year at the Kansas State Agricultural College. The spring term will begin March 28 and end June 14. The summer term will begin June 15 and end July 27.

The college places its facilities at the disposal of the teachers of Kan-

to teach this subject in country schools or village schools. Especial attention will be given to methods of teaching elementary agriculture in the rural school or in the grades in the village, with suggestions for laboratory work.

The only fee charged by the college will be the regular incidental fee of \$3, which the state requires to be charged of all students who are citizens of Kansas. Nonresident students will be charged \$20 for the first term and \$10 for every term thereafter. Board and room may be had for from \$4 to \$5 a week. President Waters is personally directing the arrangements.

EDWARD O. SISSON'S BOOK.

"The Essentials of Character," by an Alumnus, Has Just Appeared.

A valuable contribution to educational literature, "The Essentials of Character," by Edward O. Sisson, has been received. Mr. Sisson was graduated from the Kansas State Agricultural College in the class of 1886. He is now professor of education in the University of Washington at Seattle.

"The Essentials of Character" will be found particularly valuable to men and women interested in developing the young along lines most certain to prove important as they go through life. But it is also one of those rare volumes treating of scientific subjects in manner so engaging, so free from the stock phraseology which usually is a cumbersome feature of such books, that everyone, in professional or lay life, will find himself amply paid for its reading. The book is attractively presented by the MacMillan Company, New York; price, \$1 net.

ORIGINAL JOKES, THEY SAY.

The Y. M. C. A. Minstrels, February 13, Promise an Unusual Experience.

Remember the Y. M. C. A. minstrel show February 13. Fifty characters will entertain the audience. Six end men will crack original jokes and distribute roasts and knocks without stint. The show will be divided into two acts.

Features will be comic tumbling and dancing acts by the Y. M. C. A. classes. The college orchestra will assist. The costumes are in the college colors and are being made to order, no "hand me downs." The show will end with a scene in a negro grocery store. It will be a show worth seeing.

A Strong Track Team.

The prospects for a strong track team are good, says J. B. Whelan, the track coach. A number of the old men are back. Christian, Pyles, Fowler, Detwiler, Holmes, Ambler, Camp-

Why, Mr. Lawmaker?

Why did the attendance at the agricultural college gain 112 per cent from 1890 to 1900, and another 110 per cent in the next ten years?

Kansas fathers and mothers knew where to send their boys and girls for learning that would be useful tomorrow. That's why.

journalism and the highest possible standard of morals in the newspaper field.

TO TALK OF FLOUR.

Prof. Willard Will Tell the Science Club About Certain Substances.

The fifth regular meeting of the Science Club will be in the Physical Science Building at 7:30 o'clock Monday night, February 6. The program will consist of the following papers: "The Influence of Certain Chemical Substances on the Baking Qualities of Flour," by J. T. Willard, and "Investigation of the Impersonification of Evil," by C. M. Brink.

The program for 1910-1911 of the Science Club is being sent out to instructors and senior students of the college. Others can receive copies of the same by applying to A. A. Potter, secretary of the club.

All are welcome in the meetings of the Science Club. These are held regularly in the Physical Science Building the first Monday night of every month at 7:30 o'clock. According to the constitution, all persons interested in science are eligible to membership.

IS YOUR NOTE-BOOK CLEAR?

Prof. Beall Suggests an Important Idea for the Students.

Should not every student know how to prepare a note-book properly—the sort of a note-book that would be accepted by instructors and be arranged in such a way that it would be useful just before the fateful examinations? Wouldn't the teachers smile if students should submit real note-books, instead of a jumbled mass of odds and ends—the sort of a note-book that would tell whether the student was doing anything?

L. H. Beall, assistant professor of English, suggests that such a system of keeping notes be taught to the lower classes in English, so the student may be started right. Everyone realizes that notes are necessary. A uniform system of keeping them should benefit the instructor and the student.

The Passion Play.

The Passion Play will be the subject for the regular mid-week meeting of the Y. W. C. A. next Thursday. Miss Ella Weeks will lead the discussion. These meetings are open to all the girls in college. They are held every Thursday evening at 6:45 o'clock in the United Presbyterian Church.

conducted at the agricultural college, on the farm and in the orchards and gardens.

The college has provided a summer session, devoted especially to instruction in vocational subjects, such as agriculture, manual training, and home economics. The work will be suited primarily to the teachers in high schools, but intelligent young men and women of maturity and experience and with a good common school education will be able to enter the classes and make satisfactory progress.

The course of elementary agriculture will be offered during the summer session primarily for teachers who expect

bell, Marony and I. C. Roots will be doing stunts for the coach before long. There is just a chance that Bentley and McNall, '09, will be on hand. And the old men won't have to do it all, either, for there will be several new men out for work who come well recommended. Young, of Kansas City, will try for the pole vault. Smith and Hehn are the weight men.

Larson, the student manager, is working on a schedule. The chief handicap in getting the men in shape will be the lack of a place to practice. So much interest has been shown in the prospect of an indoor track meet that the management may try to arrange for one with the Kansas City Y. M. C. A.

THE GOOD ROAD DID IT.

HOW THE FUTURE OF TWELVE CHILDREN WAS DIRECTLY AFFECTED.

Six Lived Near the Improved Highway and Six on a Neglected Earth Road—Where They Went and Why, From One Viewpoint.

What does a good road mean to a rural school? What does a good road mean to a rural community socially?

A certain township in Southeast Kansas saw fit to construct two miles of rock road, from a small town south through a rural school district. Six children of school age lived on farms adjacent to the rock road, and six on the same length of earth road in the west part of the school district. The earth road was in poor condition most of the time.

The children on the good road went to city schools, walking most of the time. The children on the almost impassable earth road went to a rural school. At that time the instruction in the town school was not any better than the rural school, in the common branches. The city school was not what it ought to have been. The rural school was noted for its excellent instructors.

Two of the children living on the rock road are now sophomores in agricultural colleges, two are seniors in high school, and two are freshmen in high school. All of them are interested in agriculture, will graduate from agricultural courses, and return to the farm.

Two children living adjacent to the earth road finished the rural school. Their interest in education was balanced against the almost impassable condition of the road the greater part of the school year. Now they are hardly average farmers. Four became discouraged and quit the rural school before they were graduated. Three of them are day laborers in a near-by town. The fourth is owner of a small restaurant in the same town.

The children of the rock road walked to church, Sunday-school, and lectures, and attended the social events in town and in the country adjacent to the rock road.

It hardly seems possible that a stretch of two to four miles of poor road would make such a difference in one's life, does it? But it did.

THE ENROLMENT IS 2,335.

Thus Far the Attendance Exceeds Any in the College History.

The college enrolment at 5 o'clock yesterday afternoon was 2,335. In other words, more students have entered thus far—with a term and one-half to come—than were here in the entire school period last year.

This means that the enrolment for the year will exceed 2,500, a gain exceeding any in the history of the college.

More Cadet Promotions.

The following promotions of non-commissioned officers have been announced:

Company A. Corporal A. L. Clapp to be sergeant.
Company B. Sergeant O. I. Oshel to be first sergeant. Corporal R. T. Wilson to be sergeant. Private J. A. Nicolay to be sergeant.
Company C. Sergeant H. G. Avery to be first sergeant. Corporal M. E. Hartzler to be sergeant.
Company D. Corporal L. Fickel to be sergeant.
Company E. Sergeant F. H. Graham to be first sergeant. Corporal V. D. Stone to be sergeant. Corporal R. F. Olinger to be sergeant. Private C. A. Patterson to be corporal.

Here's a Foundry for You.

The students in foundry-practice at the agricultural college are certainly given a taste of the strenuous side of life in an iron foundry. In January the output of the foundry was 9,322 pounds of castings. These will be used in the college shops.

THE KANSAS INDUSTRIALIST

Issued weekly during the college year by the Kansas State Agricultural College, Manhattan, Kansas.

PRES. H. J. WATERS Editor-in-chief
PROF. C. J. DILLON Managing Editor
DR. J. D. WALTERS Local Editor

Except for contributions from officers of the college or members of the faculty, the articles in THE KANSAS INDUSTRIALIST are written by students in the department of industrial journalism, under the direction of Prof. Charles Dillon.

The typesetting and other mechanical work is by students in the school of printing, of which J. D. Rickman is superintendent. Both these departments are in Kedzie Hall.

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SATURDAY, FEBRUARY 4, 1911.

DO YOU KNOW YOUR BOY?

"I'd like to get a little advice about what I'm to be," he said, easing his 22 years a bit timidly into a chair near his instructor after the morning lecture. "I'm thinking about what I'll do when I graduate and—will you advise me a moment or two?"

A moment or two! The instructor's face flushed with full consciousness of the mighty responsibility. "A moment or two! Why, son," he said, "a thing like that can't be settled off-hand; we'll have to talk and talk and argue and figure a bit. Now let's see—"

Think of it, you men who haven't a thing on earth to do except be president of a railroad or manage a bank, you men who receive \$15,000 or \$20,000 a year, what do you know about responsibilities? Why should you lie awake at night, worrying about your pitiable little stock market or your crooked cashier? What right have you to gray hairs? How should you like to have a young man ask a question like that; a question that, in the result of its answering, may involve almost anything, from the founding of a new political party to the building up of a great business, or a scientific discovery that shall mean something in the domestic or commercial economics of a nation? Would you pass it over in "a moment or two," and tell the boy to get ready to be a farmer or an editor, a preacher or a politician?

You certainly would not. You would hem and haw and fidget about in your chair exactly as the instructor did and feel what a poor sort of chap you really were, away deep down where the student couldn't see. That's what you would do every time one of those boys came in, for, no matter how often you had been "through the ropes" or "down the line," no matter how deep had been your experience of life, you would hesitate before you sent a boy out with advice that might mean so much, right or wrong.

Many and many a student takes this big question to his instructor in college instead of to his father. "Shall I go back to the farm?" they ask, "or shall I try Kansas City or Chicago or New York?"

Why don't they go to their fathers, these boys of yours? Because you haven't kept close enough to them as the years went by. You've let them slip away from you with their confidences and the little troubles that seemed so tremendous to them; you've kept your eternal grouch alive so steadily that the boy supposed sympathy was dead in your unresponsive heart—and so he went to a stranger for help.

What do you intend to tell the Final Doorkeeper when he asks you—if you ever get close enough—"why did your boy leave the farm?"

What are you going to say? Do you expect to put over that old one about all boys being lazy nowadays, or the other stock answer that boys are looking for easier work? Is that the idea? Well, it won't do. You'll have to tell the bald truth that the house was a ramshackle old thing, that after the children had worked their way through the agricultural college—because you wouldn't give them the money—they refused to live

in it any longer, wouldn't bathe in the galvanized tub, refused to clean the smoky oil lamps, wanted water piped into the house, and finally jumped out of the shafts and galloped away to town.

And all the time you had money in the bank or was buying more land, and your heart was as hard as a Central Branch flatwheel and the smiles of your younger days had changed to an ingrown frown. O, you've a lot to answer for when you reach the Golden Gate.

MR. HOWE'S PLAY.

One thing is certain, now that the whole disturbance is over, Ed. Howe was wise to try his drama on the dog before buying a theater on Broadway to show it to New Yorkers. From the beginning the piece confirmed Mr. Howe's confession that it had been written in only a few days. He was not just to himself in putting it upon the stage after such hasty writing, such poor preparation. It wasn't fair to the book upon which the play was based. With only the kindest, most generous feelings for the author one is certain to feel thankful that the premier presentation was in Topeka, with 500 friends in the house, rather than in a Broadway theater with hostile or indifferent critics.

But why should Mr. Howe be misled as to the merit of his play, if it have any? Of course, as those of experience know, the author will be the last to know the truth. Someone of influence in this case should tell Mr. Howe to withdraw his play until it has been edited, cut to the bone, rewritten in many places, made over more nearly to resemble the book. In its present crudity "The Story of a Country Town" suffers in the treatment and suffers much. No company of players—and the Norths are competent people—could do much with the cumbersome material handed them in this production. Think of a supper scene forty-five minutes in length with hardly an important thing in it! Think of reading a love letter of four pages on the stage!

Think of two normal persons fussing for two or three years and parting in death because of a previous engagement! Imagine a wife going driving with the man who had caused all the trouble, two minutes after ordering him off the place—and her yap of a husband right there and not lifting a hand to stop it. Of course, had he lifted one that would have been the end of the play and there would have been no sobs and no curtain call for Mr. Howe. Any sensible policeman could have fixed up that row in two minutes.

Without desiring to pose as an oracle in the matter of plays, it is proper here to say that thirty years' play-going leads to the belief that Mr. Howe will have to remodel his drama. But he has plenty of time now. How happy he must have been to present the play to all those sincere friends and to hear them call for him after the first act! That was reward enough.

THE COLLEGE MAN'S ENGLISH.

It is safe to say that the average person, who has no opportunity to learn what the college man can do, judges both the man and his college by the kind of English he uses, more than by any other standard. The reason for this is that no one, whether college trained or not, goes about showing his knowledge, or ignorance, as the case may be, of such subjects as mathematics, history, or political economy; while no one can help showing how much or how little he knows about the proper use of the mother tongue. As a consequence, many a graduate is a standing reproach, in his community, to his college, simply because of his ignorance or carelessness in the use of English.

The failure of the college graduate to use good English is either partly or altogether his own fault, for even ignorance, in this day, is no excuse for the incorrect or inelegant language, and least of all by a college man. The fundamental trouble is either that he has not taken the trouble to observe what is correct or, more likely, that he has become careless of his habits of speech.

A Golden Text.

God judgeth the righteous, and God is angry with the wicked every day.—Psalms, 7:11.

From both the physiological and the physical point of view, speech is a matter of habit. When you meet a friend you say, "How do you do?" without willing to use that expression. You merely will to greet him in passing. When you write a letter you begin, "Dear so and so," not because you remember that you always begin a letter in that way, but because a chain of habit binds you to that expression. You say "I thought" instead of "I think," not because you are conscious of knowing that "thought" is incorrect, but because you have always said "thought." Furthermore, it is with speech as with other activities of the mind and body, an expression used once is the more readily used again. One forms the habit of using slang by using slang.

Finally, if the college man is to use English that will not be a constant source of embarrassment to himself and of reproach to his college, he must form correct habits of speech while he is in college. He must be careful and observant every day, both in the recitation room and at the eating club, on the campus and off. And he must keep everlastingly at it.

FOR WESTERN KANSAS.

Don't forget Western Kansas where the beets come from. Four years ago Finney county deeded to the agricultural college a farm consisting of 160 acres, to be used as an experiment station and for demonstrations in general farming on the uplands of that region. The land is practically without equipment or fences. It is estimated that to erect a suitable cottage for the superintendent, a barn, and necessary fences, to buy the necessary machinery and live stock, and to maintain the work for two years, there will be required an appropriation of \$5,000 in 1911-'12 and \$2,500 in 1912-'13.

THE STAR'S NEW HOME.

It won't seem like the same old smile at Eleventh and Grand. The Star has moved. For a while, to soften the blow, the business of taking in advertisements and receiving subscriptions will be continued at the old stand. But the machinery that has made The Star hated or admired—there never is a half-way feeling where a great paper is concerned—by thousands has gone down the avenue to Seventeenth to a fine and handsome home. Luckily, the new office is within the zone of circus parades—Nineteenth street is the limit—and the annual display of the P. O. P., so that the members of the staff still will hear their favorite march when the bands are passing by.

The change means much more to the old employees of The Star than mere outsiders may suppose. For one thing, their lives will be a bit humdrum without the daily alarm of fire on the roof or in the etching room, a thrill that is sadly missed by a former employee. It may be a few weeks, too, before "Vine Street Patron" and "Troost Avenue" and "One Who Knows" discover the new local room. The newsboys are likely to perish for lack of the old water barrel in the hall. How the writers are to "get the first line" without looking across to the millinery rooms of the big department store opposite is a mystery. Little items, perhaps, but they formed the paragraphs that made up the story of the loyal existence of The Star's staff at Eleventh and Grand.

AS TO OIL LAMPS.

One of the queer things about the oil lamp business is this: The best reading lamp on the market to-day is made and sold by the Standard Oil Company. But only a few persons, comparatively, have that kind. Without any desire to boost the wares of the trust, it is only fair to say that if everyone did use that lamp electricity would have fewer friends in the homes.

But they don't use it. Probably two-thirds of the lamp users in rural communities have the cheap, unsightly

contraptions sold in cross-roads grocery stores. These lamps are a source of labor for the women; they are smoky and ill-smelling. They are hideous things to have in a house. Two-thirds the lamps in the land are nuisances anyway, and for the one reason that they make work where electricity would save it. They keep the people in Civil War times when everything possible should be encouraged to make things easier for the women and the girls.

If the cheerful gentleman on The Star, with the trenchant typewriter, who sprang so valiantly to the defense of the oil lamp a few days ago, had had a long, heart-to-heart talk with his wife before turning loose he would have praised the college electrical department for trying to encourage the use of electricity on the farms. The women know.

HEAT TUNNELS.

It is necessary to extend the heat tunnel at the agricultural college to the new armory and gymnasium. The equipment in the present tunnel is in very bad shape, and needs, for efficient and economical service, overhauling, and in many instances entire replacing. The cost of all this work probably would be \$10,000 or \$15,000.

It is estimated that the amount absolutely imperative to be done within the next two years will require an appropriation of at least \$3,000 in 1911-'12 and \$3,000 in 1912-'13.

FOR COAL NEEDED.

Experience has shown that it is not possible, at times, for the penitentiary to supply all the state institutions with the coal required. At times the college has had to purchase coal in the market, and has for months been in imminent danger of a shortage. The board of regents, therefore, recommends to the legislature that a fund for this purpose be appropriated to the college, with the provision that only such part of the fund is to be used as is required to pay the freight and drayage on the coal from the penitentiary and for the purchase of such coal as the penitentiary cannot furnish, the remainder to revert automatically to the state.

The board estimates it will need \$14,000 in 1911-1912 and the same amount in 1912-1913 for this revolving fund.

FOR BETTER DAIRYING.

Kansas ought to be, and is destined soon to become, one of the leading dairy states of the union. Dairying is, perhaps, one of the most permanently profitable specialties of farming. The whole problem of developing the industry, of increasing the quality of the dairy products of the state, the inspection of the skimming, cream-buying and manufacturing plants of the state, the inspection of testing cream, etc., rests in the office of the dairy commissioner. This office is connected with the agricultural college, where dairy husbandry is taught. Nearly 300 farmers and cream buyers are taking the "Short Course" in dairying this winter. This means high-class dairying, improved manufacturers, better butter, increased incomes, more comfortable homes.

To conduct successfully the office of dairy commissioner, with its constantly increasing duties and widespread influence, the board of regents has asked the legislature to appropriate \$7,500 in 1911-'12 and the same amount in 1912-'13. It's worth it.

Don't Forget the Dunbars.

The Dunbar Company Male Quartet and Bell Ringers will appear February 7 as a number on the society lecture course. The company has been here twice, always giving satisfaction. The Dunbars not only sing, and ring bells, but give an audience a variety. One member plays the cello and is considered an expert. Another presents character sketches, his repertoire covering a large variety of subjects in as many dialects. The program will be classical and popular.

Shall I tell you the secret of the true scholar? It is this: Every man I meet is my master in some point and in that I learn of him.—Emerson.

What Are You Doing?

"Do you lazily nurse your knee and muse? Do you contemplate your conquering thews With a critical satisfaction? But yesterday's laurels are dry and dead And to-morrow's triumph is still ahead; To-day is the day for action.

Yesterday's sun: is it shining still? To-morrow's dawn: will its coming fill To-day, if to-day's light fail us? Not so. The past is forever past. To-day's is the hand which holds us fast. And to-morrow's may never hail us.

The present and only the present endures. So it's hey for to-day! for to-day is yours For the goal you are still pursuing. What you have done is a little amount; What you will do is of lesser account; But the test is, what are you doing? —Edmund Vance Cooke.

SUNFLOWERS.

That'll be about all for the ham.

The new home of The Star, it is reported, is to be equipped with oil lamps.

Fame consists in having a middle name and getting it printed, blackface, in a magazine.

Now the osteopaths demand a separate board. The osteopaths are always rubbing it in.

The man who needs a "pull" will find precious little satisfaction in success—if success comes.

Maud Adams failed as Chanticleer. Why not try the smaller strains, bantam buff cochin, for instance?

After all this publicity it may not be amiss to inquire if it is not possible that the Thaw jewels melted away?

The man who is too busy for the ordinary courtesies of life will find, some day, that no one cares a rap what he's doing.

Several attempts have been made recently upon the life of Sir Thomas Lipton. He should quit advertising on the bill-boards.

Recognition may come late in life, but if it is based on merit you will be a happy man; you won't mind the gray on your temples.

There's one consolation, anyway, in the knowledge that Walt Mason will have to hustle to find something to rhyme with Hapgood.

And, by the way, the Most Beautiful Words contest now epidemic in Kansas City shows what a lot of maudlin yaps there are in this world.

The Hutchinson News and the Topeka Capital are wrong in supposing Ballinger has lost his hat. He has been talking through it for a year.

Respectfully submitted for entry in the Most Beautiful Words contest in The Star: "The legislature at Topeka passed the appropriation bill to-day."

If the question may be asked without seventy-five editors jumping on us at once, will someone please say who is Ruth Cameron and where is she "at?"

After reading the accounts of rural tragedies these days, the decision is inevitable that the slogan must be changed to "make life in the country certain."

"The cold wave is here," was the advertisement of a coal dealer in Manhattan last week. The thermometer that day went up to 72. But it was a standing ad.

Collie's is likely soon to be barred from the mails. Norman Hapgood says his publication intends to tell just what some newspapers represent. There is such a thing as going too far.

"The man of family," said Norman Hapgood, while at the Kansas State Agricultural College last week, "who would give up a position to 'take his chances' in New York should be prosecuted."

And now someone asks Kansas City to revive its art commission. This is certain to involve an inquiry as to the whereabouts of the tenement commission and the lamented plans for certain conveniences at the Junction.

The Missouri legislature is arguing as to the advisability of letting motor-cars run 25 miles an hour. If the legislature would enact a law forcing the Missouri Pacific to run one-half that fast it would be more to the purpose.

Of course if a man owns a paper and has deceived the public into giving up until he—the man—has enough to take a European trip, of course he has a legal privilege to write weekly letters to the said paper. But—

LOCAL NOTES.

Roy Hamilton is ill with pneumonia. E. H. Webster, dean of agriculture, went to Topeka Monday.

Target practice goes on every day at the Armory. Many of the cadets are good shots.

E. L. Holton, professor of rural education, will go to Dodge City, February 11, on institute work.

E. R. Angst, an expert for the Dupont Powder Company, has been in Manhattan for several days.

Leslie A. Fitz has returned from a trip to Ellsworth and Ellis counties. He attended several institute meetings.

W. A. McKeever, professor of philosophy, has returned from New York, where he addressed the child conference.

Alden Strong, senior student, was called home this week by the death of his father, W. D. Strong of Goddard, Kansas.

Miss Frances Brown, Pleasant E. Crabtree, and E. L. Holton, professor of rural education, have returned from institute trips.

James W. Searson, associate professor of English, will speak before the McPherson County Teachers' Association, February 11.

Miss Flora Knight and Miss Estella Boot, assistants in English, have been unable to meet their classes this week, on account of the grip.

The February issue of the *Interstate Schoolman*, published in Hutchinson, has the first of a series of articles by L. H. Beall, assistant professor of English, on "Words."

The college orchestra will give a concert Tuesday, February 28, in Marshall's theater. The program will include parts of the well-known operas and will be better than the one given last year.

The Reno County Club met in the Women's Gymnasium Monday night. An indoor track meet was the feature of the evening. When this had been finished the members adjourned to the Mission Lunch Room. Thirty persons were present.

The English Seminar met at the home of Louis H. Beall Thursday night, January 26. In addition to discussing department matters, the members listened to an interesting paper by Miss Furley on the Passion Play of Oberammergau. The next meeting will be February 9, when Dr. C. M. Brink will present a paper.

ALUMNI NOTES.

R. S. Thompson, '05, is now living at Arkansas City, Arkansas.

Samuel McWilliams, '10, is visiting the College this week. Mr. McWilliams has been in Wyoming.

E. R. Kupper, '07, is at Fort Leavenworth. He is superintendent of construction for the War Department.

Carl Mallon, '07, is a traveling salesman for the C. Hoffman & Son Milling Company, of Enterprise, Kansas.

S. R. Tilbury, '07, is now in the testing department of the Santa Fé Railway. His headquarters is at Bakersfield, California.

A. C. Zimmerman, '07, who has been employed by Stingley & Co., of Manhattan, will leave for California soon. Mr. Zimmerman expects to remain in that state.

Mr. and Mrs. T. L. Jones, 731 Barnett Street, Kansas City, Kansas, announce the birth of a daughter, January 22. Mr. Jones was graduated with the class of '96.

Ralph W. Hull, '08, of Shady Bend, Kansas, spent a day at the college last week. Mr. Hull stopped on the way home from Kansas City, where he marketed a load of cattle.

Daniel Walters, '08, son of Dr. J. D. Walters, professor of architecture and drawing, and Miss Ethel Dougherty, a former student, were married January 28 at Beloit, Kansas. They will live in Garden City, where Mr. Walters is employed in architectural work.

Homer Derr, '00, writes from Big Timber, Montana, where he is principal of the Sweet Grass County high school. Mrs. Derr, '00, is teaching domestic science to the high school girls, under conditions which make it necessary for her to use her own kitchen as a laboratory.

THE JOY OF OUTDOOR SLEEP.

A Few Observations by a Student About the Healthfulness of Fresh Air.

Primitive man slept in the open and was healthy; civilization brought a pair of itching blankets and a fear of fresh air. At no time does one need such a quantity of pure air as when asleep; and it does not matter how cold it is, so long as the body is snugly protected. A sleeping porch is the only original and genuine "ounce of prevention," and the joke of it is—or perhaps better say, tragedy—that some people have to travel clear out to New Mexico to discover the fact. They learn there that the only treatment offered for consumption is a tiny sleeping tent; and maybe they wonder why they hadn't thought of that "back home." And the folks back home? Well, they are most likely coughing fearfully and padding the cracks in the window with that old red quilt—the one you pulled the cotton batting most out of while doing the same thing; but that was before they shipped you west, and wondered if they'd ever see you again.

Better have a sleeping porch. It doesn't cost much to have one built over the back porch. For a real cold night you can take a good hot brick along as a bedfellow for your feet. And then, just think how you can boast about it: "Slep' out las' night; yes sir, right out in the open; thermometer ten below when I climbed in, and goodness knows how much lower it got."

Don't fear a draft. The only draft that ever did a man an injury was an overdraft. If the chest is protected and the body kept warm you can sleep safely in a hurricane. And don't forget to breathe through the nose. Keep your mouth shut. Women should not hesitate on this account to sleep outdoors.

THE USES OF COTTONWOOD.

Its Value for Inside Lumber is not Generally Understood.

The cottonwood attains the largest size of any forest tree in Kansas. It is a native and is found growing very generally in the eastern part of the state and along the water courses throughout the western part. The large size and the clear, straight trunk that the cottonwood develops make it a very desirable sawlog. Its value for lumber production has been greatly underestimated, says C. A. Scott, state forester. The one serious objection to cottonwood has always been that it warps badly. This objectionable feature can easily be overcome by proper handling. As soon as cut it should be piled straight and even, with an air space of two inches between every tier and a strip of battens between every layer of boards. The battens should be placed not more than four feet apart and the battens of every tier should be directly over one another, so the weight will be borne by a perpendicular line of bearings. This point is very important and should be rigidly observed.

Another point of considerable advantage is that lumber of different dimensions should be piled in separate piles. This allows uniform spacing in the piles. Spacing is important, as an unobstructed circulation of air is necessary if the lumber is to dry uniformly.

When the pile of lumber is completed the top boards should be weighted down with slabs or other heavy material. A sloping roof of slabs will turn much of the rain that would otherwise retard the drying.

When seasoned the lumber is better than pine for many purposes. The cottonwood is a very perishable wood when used in exposure, but for indoor uses it is excellent. For barn building it will fill every demand for lumber except sills, siding, and cornice. For houses it can be used for joists, studding, and sheathing.

Do not dampen to-day's sunshine with the showers of to-morrow.

ADVERTISE YOUR SALE.

YOU CAN'T MAKE MONEY WITHOUT SPENDING A LITTLE.

Here is Some Wholesome Advice From a Student—Expects to Get After Farmers Some of These Days and Stir Them Up.

Did you ever attend a public sale when a "pretty small crowd showed up" and the articles sold went at a low price? Ever calculate what the owner lost by not properly advertising the sale? How many hundred or thousand per cent return would he have received on a few dollars spent in newspaper advertising? Wouldn't the return have been worth while? Ask any sensible man who has advertised his sales. He'll tell you.

Men who have made a study of the question have said that not more than one-fourth of the rural public sales are properly advertised. Generally the farmer has a few sale bills printed. He runs the same "copy" in the local paper once and the advertising campaign is ended. That is poor management, for it is obvious that the more the sale is advertised the larger will be the crowd, and a larger crowd usually means better prices. A farmer, especially the live-stock man, would drive fifteen or twenty miles to a sale where stock that he needed was to be sold. Hence the importance of extended newspaper advertising.

The amount the owner can afford to spend with the newspapers to advertise an average public sale would vary, of course, with the quality and kinds of stuff he has for sale, but it should never be less than fifteen or twenty dollars. For a larger sale the amount should be larger. For the farmer with a specialty, and all farmers should have some special line, such as fine stock or seed or fruit or vegetables, systematic and intelligent newspaper advertising is absolutely essential to success.

Publicity is necessary, and the cheapest and best method is in newspaper advertising. Don't make the mistake of advertising only when you have something for sale. If you are a Poland China hog breeder and have no hogs for sale now but will have in the spring keep a card in the paper and tell the people when these hogs will be for sale. If you don't they will forget about you and your hogs and send off to a man in the other corner of the state who does advertise. The man who expects to have something for sale cannot afford to let the people forget.

Newspaper advertising, when figured on the basis of the number of people it reaches, is absurdly cheap. And it brings greater results than an equal amount of money spent in publicity in any other line. This advice is absolutely disinterested; this paper takes no advertising at any price.

TOOLS A FARMER NEEDS.

Money and Time and Annoyance Saved by Doing Your Own Work.

If a farmer has the tools with which to work, he can repair the wagons and the different farm implements during rainy weather. He can replace worn parts, tighten a loose bolt here and another there, and not give the vehicle or implement a chance to break.

Where should the shop be? If the shop planned is to be small and equipped with only a work-bench, almost any convenient place will do. If equipped with a forge, a separate building should be used far enough away from the other buildings to protect them from fire.

If the farm is small a shop 8x10 feet is large enough for a small, portable forge and a few tools. An earth or concrete floor should be used. When space is needed for your buggy or the lumber wagon make the shop 16x16 feet. This will be an ideal vehicle shed when the shop is not in use.

The expense of the tools needed on a farm of 160 acres should not exceed \$40 to \$50. The wood tools will cost \$20 and the forge tools \$30. At a cost of two or three dollars a set of leather punches, awls, rivets, riveter, wax and thread may be bought. This will en-

able one to do all the harness repairing. Here is a list of some tools every farmer should have:

1 pocket level, 1 drawing knife, 1 rip saw, 5 point, 1 panel saw, 10 point, 1 12-inch compass saw, 1 steel square, 1 8-inch sliding tee bevel, 1 set bits, 1 each $\frac{1}{4}$ -, $\frac{1}{2}$ -, $\frac{3}{4}$ - and 1-inch socket firmer chisels, 1 expansive bit, 1 20-inch fore plane, 1 8-inch smooth plane, 1 ratchet-brace, 10-inch sweep, 1 marking gauge, 1 8-inch screw-driver, 1 $\frac{1}{2}$ -inch socket firmer gauge, 1 2x1x8-inch oil stone, 1 8-inch try square, 1 1x15-inch bench screw, 1 4x6 lignum-vitæ mallet, 1 pair 12-inch carpenter's pinchers.

The forge tools are: 1 forge, 1 pair 20-inch straight-lipped blacksmith tongs, 1 80-pound cast-iron anvil with steel face, 1 $\frac{1}{2}$ -pound ball peen-hammer, 1 hardie to fit anvil, 1 12-pound steel sledge with handle, 1 55-pound solid box vise, 1 champion post drill, 1 set dies and taps.

HOW MUCH DO YOU SPEND?

Suggestions to Reduce the Cost of Living Will Be Welcome.

For your table, one week, \$8.54. That is with a family of four. Is that too much? Or do you spend more than that? If you spend less, please tell the KANSAS INDUSTRIALIST how you do it. Maybe by doing this you will help some one who is having trouble making both ends meet.

BREAKFAST

Stewed Appricots

Corn Meal Mush White Mountain Muffins

Coffee

DINNER

Dried Peas Cooked with Ham

Hot Slaw Mashed Potatoes

Hot Rolls

Coffee

Apple Snow

SUPPER

Potato Cakes Creamed Codfish

Hot Gingerbread

Tea

By purchasing the end of the ham (the bone—it will cost 15 or 20 cents) enough meat will be supplied, and the flavor will add greatly to the dried peas.

IN THE DINING-ROOM.

Have It Attractive and Bright Without Pictures of the "Has Beens."

Make the dining-room the most attractive place in the farmhouse. Back to the attic or the bedroom with the family portraits that have been hanging all these years in the dining-room. Eating supper with the late Aunt Matilda's cold, grey eyes peering at you from a three-inch gilt frame isn't conducive to good digestion. There's a psychological reason for this, too. A farmer can't afford to be a dyspeptic.

On the average farm the dining-room is also the sitting-room. Probably it is the most used room in the house. It should, then, be the most attractive.

In selecting the wall-paper for a dining-room be sure that the colors and figures are appropriate. A plate rail around the dining-room wall gives the room a most attractive aspect and at the same time the rail takes the place of a picture molding.

Now, what pictures are you going to hang in your dining-room? The family portraits certainly have no place here. Cheap and highly colored lithographs will spoil the effect of the most beautiful wall-paper. So, in selecting pictures choose carefully two or three prints of fruit, game, or any appropriate subject. Have a neat, medium-sized calendar in a conspicuous place. The effect of a picture is easily spoiled by an outlandish frame, so select the frame with as much care as you select your picture. Be sure that the frame will match the wall-paper and the wood-work.

A Chance for the Girls.

It is a very good thing to be able to fix the back door or make a table or do the hundred and one carpentering jobs around the house. But 583 students at the Kansas State Agricultural College will be able to do just these things, because that number is enrolled in the courses of woodwork this year.

SERVING THE LUNCHEON

A FARMER'S WIFE ENTERTAINS AT A THREE-COURSE MEAL.

Perhaps This Will Suggest New Ideas for Preparing the Good Things of the Farm—Decorating the Table—The Menu Complete.

The sight of the Black Eyed Susan growing along the lane leading up to the house decided the date of Mrs. Reed's luncheon. This was aided by the fact that there was a lull in the farm work just then. The days were hot, but the wide, screened porch would easily accommodate her half dozen guests.

A farmer's busy wife does not have much time to keep her dining table polished to the state of brightness necessary for a luncheon cloth and dainty doilies. Mrs. Reed covered her table with a heavy damask cloth. In the center she placed her old, brown bean pot filled with the Black Eyed Susans. Just before serving time she scattered a few of the more perfect blooms carelessly over the cloth.

The place cards were only plain calling cards bearing the guests' names. The table was simply laid with plain white china and the silver necessary for the few courses. Muskmelon halves on service plates and glasses already filled made the first course easy for the young neighbor girl who helped her serve.

Being without other assistance, the hostess had to help get the next course ready. This was thoroughly substantial and consisted of delicately fried chicken and brown gravy, potatoes mashed and browned in the oven, tender cabbage cooked as the southern women do it with a hot dressing of mustard, vinegar and cream, and tiny baking-powder biscuits. The plates were served in the kitchen and the gravy and biscuits were passed by the maid.

They finished with green gage sherbet, chocolate macaroons, and small cups of black coffee. Here again in the serving Mrs. Reed excused herself to her guests who, being so used to it in their own homes, did not consider it a breach of good form.

After luncheon the table was pushed back and the guests enjoyed the cool breeze from the woods and creek below. Most of them busily plied their needles, while one of the party read an interesting article from one of leading woman's magazines on "How to Make Woman's Work Easier."

SAVE THE SOIL.

Some Suggestions for the Management of Hillside Fields.

You have noticed that the soil on the sidehill field has washed badly the last few years. Ever wonder what was the reason for this increased water action? Do you wish to stop it?

Humus, the decaying vegetable matter in the soil, tends to prevent this erosion. Humus absorbs moisture and retains it. When the soil contains an abundance of humus the soil particles are kept apart and they can absorb more water. The soil is open and the water tends to soak into the ground instead of run off. Therefore, one of the best ways of preventing erosion is to keep the soil full of humus. Have the grasses or legumes occupy a prominent place in the rotation for the hillside fields.

Perhaps some bad gullies have formed in your field and you desire to fill them up. If so, make the force of the gullies—the force that washed them out—fill them up. Place brush in the ditches with the tops up-stream and it will catch and hold the material washed down. Even a better method, however, is the use of the woven-wire dam. Place a stake on each side of the gully, three feet from the bank, and fasten a piece of woven wire to them. Place old hay above this wire and it will catch almost all of the material washed by the water. The gully will then fill up. When it reaches the top of the woven wire put on another strip and repeat the process.

Soil erosion can never be prevented entirely, but it can be greatly reduced by a regard for the principles of proper soil management.

HOW TO SOW YOUR OATS

NOT THE WILD KIND, BUT THOSE THAT BRING IN MONEY.

Prof. Ten Eyck Describes the Process From Planting to Cutting Time—How to Care For the Land—Seed Selection.

Suppose you don't know much about oats—or you do know a few things, but need to know a whole lot more. Oats, be it understood, are getting much attention just now throughout Kansas. The crop and the variety are improving. Here are a few pointers from A. M. Ten Eyck, professor of farm management, superintendent of the Western Kansas branch experiment station at Hays. He knows.

Sow oats on fairly fertile land, but not too fertile; because the crop may lodge when grown on very fertile land.

Sow early; the earlier the better; even risk sowing in February or March, before spring really begins, if weather and soil conditions become favorable.

Sow early-maturing varieties of oats, preferably those varieties recommended by the state experiment station. Among the better producing varieties are: Red Texas, Kherson, Sixty Day, and Burt. The Sixty Day and the Burt are especially adapted to the dry part of the state.

HAVE THEM GRADED.

Grade your seed oats with a good fanning mill or grain grader and sow only plump, heavy grains. This will make the crop much surer and the yield larger. By continuing the practice every year, a variety well adapted to the climate and soil should not "run out," but rather improve in hardness and productiveness and quality.

Prepare a well-settled, well-pulverized seed-bed. Early fall plowing, surface tilled during the winter and early spring preferred, or clean corn stalk land well disked and harrowed but not plowed. Oats may also follow cow-peas or soy-beans without plowing.

Spring plowing for oats is usually not desirable. The soil may be too wet to plow well or after plowing it may become too loose and in bad physical condition. Occasionally winter plowing and very early spring plowing with the soil in ideal condition may give good results.

Prefer planting with grain drill at the rate of 2 to 2½ bushels of good seed oats an acre, covering the seed at a uniform depth of two to three inches.

IN CULTIVATING.

If possible harrow once lightly before the oats come up.

If seed oats are infested with smut it is advisable to treat the seed to destroy the smut, using formaldehyde treatment, after getting the bulletin from the experiment station giving information regarding its use; or it may be advisable to change seed oats, getting smut-free oats from other sources. This is especially advisable if your oats are "run out" or light in weight. The experiment station can furnish names of growers of college-bred seed. Also the branch experiment station at Hays, Kansas, has for sale a supply of seed of the several varieties named.

Commercial fertilizers can be used to advantage as a rule in the growing of oats, by direct application to the crop. Better fertilize preceding crops with barn-yard manure or by a process of rotation, including soil fertility maintaining crops, such as cow-peas, clover and alfalfa and grasses. Prof. Ten Eyck will send circulars giving information on these subjects if desired.

WALNUTS HERE FROM TIBET.

W. E. Blackburn Has Sent the Strangers to the Horticultural Department.

W. E. Blackburn, president of the board of regents, who is an enthusiastic horticulturist, has just sent to the horticultural department some English walnuts, which, it is hoped, may be the progenitors of trees that will withstand the Kansas climate. These nuts were sent to Mr. Blackburn by Dr. Shelton, a medical missionary at Ba-

tang, Tibet, which, owing to its altitude of 8,600 feet, has a climate believed to be quite similar to that of Kansas. The thermometer usually goes to zero and sometimes lower. Practically no rain falling from September until April furnishes conditions that are believed to be quite similar to those of Kansas. The nuts have somewhat harder and heavier shell than the commercial nuts from Persia and California, but they are of good size and have the characteristic shape and quality of the English walnut.

The need of more and better nut-bearing trees for Kansas has long been acknowledged. The black walnut is about the only species that has been very widely distributed, and while this is an excellent nut, its thick and hard shell makes it of low value for a dessert or table nut. The pecan has been planted in Kansas in a number of localities with rather varying success, but as a rule the trees have been found hardy and have produced crops about as frequently as have the common fruit trees. Most of the Kansas pecans, however, have been rather small, with a hard, thick shell.

The horticultural department has procured some nuts this year from Alvin Goff, of Arkansas City, Kansas, which are of decidedly superior quality, being of good size and having a shell so thin that it cracks readily with the common table nut cracker. The interior sections of the shell are so thin as to allow the kernel or meat to be removed readily. It is believed that this species should succeed well throughout the south half of the state, and it is hoped that they may succeed in a wider range of territory. The nuts are now in sand which is kept wet and exposed to the weather. They will be planted next spring, and later be tested in several parts of the state for hardness.

WHEN IRRIGATING BEGAN.

It Was 1895 Before State Aid Assured Success for the Undertaking.

So far as rainfall is concerned Kansas is divided from east to west into three parts. Only the western third has much use for irrigation. The first headway made toward placing that part under irrigation was in 1890. A convention was held at Great Bend that year and a state organization effected whose purpose was to study the needs and aid in the development of the country. But this hopeful effort did not get much beyond its beginning. It was not until 1895 that a definite start was made. Then the legislature created a board of irrigation and appropriated \$30,000 for its work. In 1896 this board did its first work, and this date can well mark the start of Kansas irrigation.

Throughout the humid and semi-arid districts there is an unlimited supply of water close to the surface of the earth; moreover, there is little access to large streams, so irrigation has been largely confined to pumping plants, usually of the windmill type. The following cities, especially, are centers for this type: Garden City, Ingles, Cimarron, Dodge City, Kinsley, Great Bend, and Hutchinson.

In general, the most important points to note in connection with irrigation in the western third of the state are: The cost of a windmill plant will be from \$90 to \$150, according to the size of the pump used; the cost of the reservoir will be about \$60 more. Shallow wells pay better, as the flow usually is much greater. In digging the well it does not pay to go below the shale, for then water cannot be found until a depth of at least 250 feet is reached.

Who Owns the Holgad?

The *Holgad*, a student publication, has been received. Neither on the cover nor on the second or third or several other pages was any clew discovered to show where the paper is printed—only the name and a date. Some college, somewhere, is wasting money for printing for which it receives no credit. This is what a certain paper in Kansas City calls "lunkheaded management" when it mentions a certain corporation.

DECORATE YOUR HOME.

SOME PRINCIPLES THAT WILL AID IN MAKING HOME MORE ATTRACTIVE.

Furnish the Bedrooms With Some Regard to Their Location and the Light That Enters—No Portraits in the Guest Chamber.

Do you live in a rented house? Or do you own a home in which some of the rooms are too large and some are too small? You can make them cozy and attractive by using a little skill in selecting the furnishings to harmonize and at the same time cover up defects. The living-room, dining-room and bedrooms are used by all the family, and they should be as attractive and cheerful as a mother's mind can make them.

Light, plain colors make a room appear larger. A room with a high ceiling and narrow walls can be made to appear more in proportion by allowing the ceiling covering to extend down over the walls several feet. Another plan to remedy a high ceiling is to make the base-board appear higher by using canvas or some material which can be painted to match the wall-paper. Finish this with a moulding.

ABOUT LOW CEILINGS.

High, narrow windows and doors can be made to appear more in proportion by having the curtain rods or portiers a little below the actual height and covering up the intervening space with some thin material that will correspond with the ceiling in color. Low ceilings can be more easily remedied. One of the easiest plans is to use striped wall-paper and long, straight draperies.

Nature scenes are beautiful because of the harmony of colors displayed. The true home maker should desire to have the interior of her house correspond with nature's law of harmony as nearly as possible. This can be done without extra cost if she is careful in selecting her house furnishings to have them harmonize.

AS TO THE COLORS.

The location of the rooms should determine what colors are appropriate to be used. Rooms with a north exposure and dark should always be finished off in golden brown, red or yellow, as these colors suggest light and warmth. Light, airy rooms look more attractive in blue, light green, or pink. The darker tints in a room should always be in the floor covering and the ceiling should always be the lightest. Care should be taken in selecting furniture to have the best and not too much. All the furnishings should harmonize. Bedroom furniture should be enameled and not polished wood. Draperies should be of washable material, as they are more sanitary.

Care should be taken in selecting pictures. Copies from the best masters should adorn the living-room and dining-room walls, especially the living-room. Dining-rooms, as a rule, do not need many pictures, as the walls are often finished with plate racks. The bedrooms are the most appropriate places for the photographs, as it is the one room every member of the family can call his own, and it should be fitted up according to his desires. Don't put portraits in the guest chamber.

Every woman desires to make her home attractive and worthy to be called a home. An interior harmoniously planned will create an atmosphere of rest and peace. These make a happy home.

CUT DOWN THE GROCERY BILL.

You Can Do It With a Back-Yard Garden Properly Cultivated.

These are days of high prices. You are looking for something to reduce your grocery bill. The back-yard garden will do this. You can have vegetables fresh every day next summer. You need not have a very large garden, either. Almost everyone has a small piece of ground that can be converted into a vegetable garden that will bring pleasure and profit. A few suggestions as to how this may be done may be helpful.

The garden should, if possible, have a southern exposure to get all the sunlight possible. A windbreak at the north will help in keeping off the cold winds and warming up the ground earlier in the spring. However, make a garden whether you have these conditions or not.

Now is a good time to plan the garden. If you wait until planting time you will not know how much of each vegetable you want, and as a result you will get too much of some and not enough of others. If it is all planned out before hand it will be much easier at planting time to put in the seed.

Preparation of the ground should be begun in the fall. If you haven't done it get at it early in the spring. Plow or spade the soil deeply. Add a little manure and work the soil until the manure is well mixed with it. Manure is very essential, and is available almost to everyone.

When planting, it is best to use a garden line. The rows will be straight, giving the garden a better appearance; and you will economize space, as you can put more straight rows in a given space. Don't be content with just one crop. You can plant late corn after the lettuce and radishes are taken off, and more lettuce after beans. Other combinations may be made. In this way you can get the most out of the land. For best results by this method a little manure should be put on the ground after each crop has been gathered.

Cultivation should begin soon after planting. It serves to hold the moisture and keep the weeds in check. A good time to work the ground is as soon as it becomes dry after a rain. If the garden is not too large to be watered by hand a better growth may be obtained in this way.

BOOKS FOR EVERY FARMER.

A Little List That May Be Valuable to the Modern Tiller.

Many farmers read newspapers and magazines, but how about books? Very few. Certainly they do not read as many books as they should. Newspapers and farm magazines keep them informed of the events of current interest, give them market reports, and advise them on farm subjects. They should most certainly be read.

But why not read books? Good books on agricultural subjects are of inestimable value to farmers. Time spent reading about live stock, soils, farm machinery or crops is time well spent. Here's a little list:

"Judging Live Stock," by John A. Craig. This book deals with horses, cattle, sheep and hogs, and gives the standard of excellence set for these animals.

"Physics of Agriculture," by F. H. King. This book explains the chemical and mineral composition of the soil, conservation of moisture, drainage, farm machinery, and weather forecasting.

"Profitable Stock Feeding," by H. R. Smith. Explains the general principles of stock feeding and the relation of live stock to the farm.

For those who are interested in fruit growing, "Popular Fruit Growing," written by Samuel B. Green, would be of value. It explains the protection of fruit, insect diseases, spraying, and the harvesting and marketing of the crops.

For those interested in dairying, "The Business of Dairying," written by Clarence B. Lane, would be valuable. It tells of feeds and feeding, care of the herd, dairy products and their sale.

The first four books mentioned are used as text-books at the Kansas State Agricultural College.

When the Fire-Bell Rings.

You need not be alarmed if you are awakened some night by the loud ringing of a fire-bell. It may be only the Aggieville volunteer fire fighters out for a little practice. Aggieville has fifteen husky volunteer firemen. Charles Yost, of the college, is chief. A large bell has been purchased and hung at the rear of J. F. Harrison's store. When it rings, it's time to drop everything and turn out. Something may be doing.

DON'T SELL MARSH LAND.

PUT IN SOME TILING AND YOU'LL HAVE A VALUABLE TRACT.

No Longer Any Mystery About This System of Saving Waste Areas—An Example Worth Remembering—The College has an Expert.

It is easy to get rid of marshy areas of farm land. Don't sell it just because you have no use for it, for you have. Dig a few deep ditches through the tract, lay some eight- or ten-inch tiling in them, and fill the trenches again. At angles to these main lines, run feeders or laterals like the veins of a leaf. These will consist of lighter tile, with no flanges, placed end to end, not so deep in the ground. The oversupply of water will find its way through the open joints of the laterals and be conducted to a neighboring stream or slough.

Land is too valuable to be sacrificed because it habitually holds more than its share of moisture. And marshy land is too fertile to lie untillied for any reason. The richness usually is attested by rank growths of juicy reeds and grasses, neither of which can be harvested easily and are of little value if cured.

THIS LAND RECLAIMED.

In one Kansas county farms are being made from just this kind of soil. The prevailing price of land is one hundred dollars an acre. The land has never been tilled, because it was overflowed every spring by a small creek—commonly known as a river—and the water stood in pools until long after planting time.

Ditches have been dug through the wettest portions and thousands of feet of tile laid. Areas which the promoters bought for minimum prices are now close to the top of the market. Much more than the price of the tile has been returned to the owners.

Tile draining long has been a mystery to most persons. Many a farm visitor has wondered how the water got into the little tiles and where it went finally. But it's all very simple—when you understand. And when you don't understand but you believe draining is needed on part of your land all you have to do is to notify H. B. Walker, the drainage expert at the Kansas State Agricultural College. If you pay his expenses the extension department will send him to your farm and he will tell you what is needed.

GET A GOOD FOUNDATION.

It is a process, too, that not only brings more land into cultivation, but it utilizes the best land. The soil is a rich sandy loam, a good one for corn. Native grasses will maintain a rank growth. There is small chance of a drouth and the soil will not bake. A certain quantity of air is needed in the soil and this is supplied by the open tile.

In laying the tiling, it must be placed on a solid foundation. This is readily obtainable by setting it on the firm subsoil. At this depth it will not be disturbed by cultivation, and the freezing and thawing to which it is subjected will be minimized.

A little fall must be given to every lateral, and they must be of such length that the low end will not be carried too far below the surface of the ground. If the area to be drained is extensive, it would pay the owner to have the lines run and the falls indicated by an experienced engineer.

How to Write a Letter.

Nelson Antrim Crawford, assistant in the English department, is preparing a handbook of letter writing, for use in the rural districts. This handbook contains all the proper letter forms that a farmer may desire for his social and business correspondence.

And Now He's An Editor.

E. W. Coldren, of Oberlin, Kansas, editor of the Oberlin *Herald*, visited the college last Saturday afternoon. Mr. Coldren was a student in the Kansas State Agricultural College for two years.

THE KANSAS INDUSTRIALIST

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Number 19

READY FOR THE SPRING?

THE COLLEGE AND THE PEOPLE ARE GETTING CLOSER TOGETHER.

This Program Describes Work to Begin March 1 in the Things that Interest Men and Women and Children—The Outline.

One thing is certain in Kansas for 1911: If the people refuse to study agriculture the people will have to move. The agricultural college has a plan devised especially to involve almost everyone with any interest in or upon the earth. It's no sudden, overnight, campaign plan, either. It's downright agriculture of the best variety, and it runs from domestic science, which teaches cooking, you know, to orchard work and dairying and other things. It is, in short, a "Movable Schools" propaganda, a continuation of the original "take the college to the people" idea. These lines of work will begin March 1:

Domestic Science. Since last March twenty-six schools have been held, and it will be possible to hold sixteen more this spring. A class must be pledged of not fewer than twenty-four or more than forty. Every person must pay to a local committee a fee of \$1 (subject to an assessment of not to exceed fifty cents) for provisions and other local expenses. Two teachers will be sent from the college. The work will continue for one week.

FOR THREE DAYS.

Corn and Stock. These schools will continue for three days. Instruction will be given in corn and stock judging, with lectures on plant and animal breeding. The class must have at least twenty members, but not more than forty, every member paying to the local committee a fee of fifty cents.

Dairying. This will include the handling of dairy apparatus, cream separators, the Babcock test, churns, etc., with drills in judging dairy cows and lectures on breeding and management, sanitation, barn plans, silos, etc. The class and fee as for corn and stock school.

Orcharding. These schools will include practicable instruction in orchard management, pruning, budding, grafting, and spraying, with lectures on orchard plans, varieties and marketing of fruit. Class limit and fee as for corn and stock school.

Poultry. Three-day schools also will be offered in poultry management, with practicable drills in judging and lectures on housing, feeding, and marketing. Fee and class limit as for corn and stock class.

ADVICE THAT'S FREE.

The college is prepared to send out trained men to advise the farmers, orchardists, dairymen, breeders and feeders, relative to farm, dairy, orchard and live-stock management, pruning and trimming orchards, improving dairy herds, building barns, feeding cattle, etc., and also to organize cooperative breeding associations. It is prepared to send out an expert drainage engineer to advise farmers, county surveyors and engineers relative to drainage districts, farm drainage; also, to visit farms in Western Kansas to advise relative to the installation of small irrigation plants where power is to be furnished by windmill or gasoline engine, or where small reservoirs are to be constructed.

Assistance will be given during March and April in spraying orchards and, later, in the marketing of the crops. The highway engineer will advise with the county commissioners relative to roads and bridges, also with city councils relative to their local problems. The college, also, will assist in the building of silos and advise as to the construction of the same. In fact, the college, as far as its force will permit, will send out men to advise as

to almost all problems of farm management.

For all work described the college will expect only the actual expenses of its experts. As much of this visiting and all of the schools must be arranged in circuits, the expense will be small.

Many communities may hesitate to arrange for a three-day or a six-day school, and yet be eager for one "Demonstration Day," on some such subject as "Cooking," "Poultry," "Horse Judging," or "Orcharding." These can be arranged for by getting up a regular class of fifty at a fee of twenty-five cents to meet the local expenses.

If you are interested you should see or telephone an institute officer at once. Then get busy and interest others. If the institute officers cannot

NEARLY CLEAN-UP DAYS.

WHAT DO YOU INTEND TO DO IN YOUR TOWN?

It Won't Hurt Any to Offer a Few Suggestions About Small-town Work Now That Winter is Almost Gone.

Winter is almost over. Have you made any plans to improve the town in which you live? Do you clean up once or twice a year, or 365 days in the year? What will you do with the vacant lots; grow weeds or have gardens? How about the yards? Will they be kept clean or will trash accumulate and make a breeding place for flies and disease germs? If you are interested in improving your town, try

Going Back to the Farms.

Of 2,335 students enrolled in the Agricultural College thus far in the school year, *nearly 80 per cent came from farm homes.* Seventy-five per cent are going back to those homes.

These boys and girls are returning to the land competent to manage it. Think that over, too, Mr. Lawmaker.

attend to it you should write to the agricultural college for further directions. These schools and the demonstration days will be held only in March, April, and May. The visits and inspections may be made at any time.

About one-third of the movable schools in cooking and sewing are already promised. Special women's institutes, also, may be arranged. It is hoped that a few special meetings can be held for "Corn Contest Boys." All correspondence should be addressed to the Extension Department, Kansas State Agricultural College, Manhattan.

ITS SEVENTH MEETING.

The Board of Control Heard President Waters and Dr. Willard, Thursday.

The seventh semiannual conference of the State Board of Control was held in Topeka Wednesday and Thursday. H. J. Waters, president of the Kansas State Agricultural College, spoke Thursday afternoon on "Coöperation Between the Agricultural College and the Charitable Institutions." Dr. J. T. Willard, dean of science in the agricultural college, read a paper the same afternoon on "Dietetics for Institutions."

Extremely interesting papers on subjects of deep human interest were read by Dr. J. D. VanNuys, of the Osawatomie State Hospital; Dr. T. B. Scott, of the Topeka State Hospital; H. C. Bowman, superintendent of the Board of Control; M. F. Amrine, superintendent of the Industrial Reformatory; Edward C. Willis, superintendent of the State Orphans' Home; Mrs. Julia B. Perry, superintendent of the Girls' Industrial School, and Dr. M. L. Perry, superintendent of the Hospital for Epileptics.

Miss Brown's Chapel Talk.

Miss Frances L. Brown, lecturer on domestic science for the extension department, spoke in chapel Wednesday on "What the College is Doing for the Women of Kansas." Miss Brown told of the many institutes and demonstrations that have been given in domestic science throughout the state.

That Foundry Again.

A special run was taken off at the college foundry Wednesday afternoon. This was to make castings for several of the automatic stokers which have been idle for two or three weeks.

some of these plans, recommended by E. L. Holton, professor of rural education in the Kansas State Agricultural College.

All small towns have vacant lots which produce only weeds. Organize a club among the boys. Rent every boy a lot. Have him pay a certain amount, depending upon the size and location of the lot. Then offer prizes for the best-cultivated lot, the best-producing lot, etc. Give a prize to the boy that sells the largest amount of garden stuff, or to the boy that grows the largest ear of corn, the best ear of corn, the best pumpkin, etc. Do this, and you will keep your lots clean and your boys busy.

GIRLS IN IT ALSO.

Girls might be allowed to enter this contest, if there are plenty of lots, but preferably, a flower club should be organized. Give every girl some flower seed. Let her choose the kinds she likes and believes will be the prettiest. Offer prizes for the best arranged flower bed, the prettiest flower bed, and the flower bed which lasts the longest. Get the girls interested in

block. Arouse your neighbor to do his part and make your town the cleanest, prettiest and best in the state.

One town in Kansas has a system for keeping clean. The mayor has general supervision. He appoints boys to look after certain blocks and report to him the condition of the streets, alleys, and yards. Regular "house-cleaning" days are appointed and everybody helps. The result is one of the cleanest towns in the state. Every town can do this if it desires.

TO INSPECT THE SEED.

A Bill Asks for \$15,000 a Year to Pay for the Work.

A bill appropriating \$15,000 a year for the next two years for wheat and corn seed inspection has been introduced into the Kansas Senate. The inspection is to be in charge of the milling department of the Kansas State Agricultural College. Senator George H. Hunter, of Wellington, president of the Hunter Milling Company, has introduced the bill. It has the support of the millers and the farmers. The request for the appropriation comes from the millers. The agricultural college is not responsible for it.

This seed wheat inspection has been done by the agricultural college for several years, but the work has been much hampered on account of the lack of funds. After the wheat is headed and before it is cut, a personal inspection is made by a representative of the milling department. His report includes mention of disease and insect injury, purity, and probable yield. After the wheat has been cut, Leslie A. Fitz, who is in charge of the milling department, prepares a list of the farms inspected, which gives the record of the wheat on these farms. This list is sent to the farmers everywhere in Kansas. The farmer is thus protected against fraud in the purchase of the seed, as he has an exact account of the seed he desires to purchase. The pure seed grower is benefited because his name, without charge, is placed on the approved list of the milling department.

One hundred and sixty-two farms in all parts of Kansas were on the inspection list prepared last year by Mr. Fitz. A personal inspection was made of the wheat on most of these farms and a complete report was made. About one-third of them reported total sales of 30,000 bushels of seed.

The average wheat yield of Kansas is 13.9 bushels an acre. The average

NOW THE BUTTER SHOW.

ENTRIES MUST BE AT THE COLLEGE BY FEBRUARY 26.

A List of Attractive Awards for the Best Product and for Other Conditions Made Known upon Application—March 1, the Day.

The first contest of the Educational Butter Contest for 1911 will be March 1, at the Dairy Building of the Kansas State Agricultural College. All of the butter makers of Kansas are urged to get their butter in by February 26. These firms have contributed to the prize fund:

Creamery Pkg. Mfg. Co., Kansas City, Mo.	\$25
DeLaval Separator Co., Chicago	20
Vermont Pkg. Mach. Co., Bellows Falls, Vt.	10
Boerner-Price Co., Iowa City, Ia.	5
Jensen Manufacturing Co., Topeka, Kan.	5
Worcester Salt Co., Chicago	5

This will be divided into the following prizes:

For the highest average score, a prize of	\$30
For the 2d highest av. score, a prize of	15
For the 3d highest av. score, a prize of	10
For the 4th highest av. score, a prize of	5

The final contest, which will be during the institute week next December, will have the additional prizes:

Highest scoring tub	\$10
2d Highest scoring tub	5
3d Highest scoring tub	3
4th Highest scoring tub	2

The J. B. Ford Company offers the maker of the highest scoring tub for the year, a carving set, and the maker of the second highest tub, a cut glass sugar and creamer.

E. Sudendorf, western representative of the Wells-Richardson Co., offers a choice of an office or a parlor clock to the man having the highest score using his firm's product, and a bonus of \$5 if he has the highest score of all. The Diamond Crystal Salt Co. offers a silver loving cup to the winner of the series under certain conditions.

The college issues a butter maker's certificate to any butter maker having an average score of 90 or better. To be eligible to the prizes and certificates, five out of six contests in the year must be entered; and at least three contests must be entered to be eligible for the special prizes.

A sample of butter consisting of not less than ten nor more than twenty pounds should be sent to the college by prepaid express. It will be scored, held sixteen days and then rescored. A moisture and salt analysis of every sample is made. The first scoring determines the placing of the butter. Definite arrangements as to who will judge the butter have not yet been made, but this will be announced as soon as possible.

A blank is furnished each contestant to be filled out and sent to the department, so that the exact conditions under which the butter is made may be known. For further information regarding these contests, address the Dairy Department, Kansas State Agricultural College, Manhattan, Kansas.

Care For Your Live Stock.

If you are in doubt as to the conditions you should give your live stock in the barn-yard, imagine yourself in the animals' place.

Of course a vigorous, thrifty condition of ducks and geese requires a pond in which they may bathe and search for food, but this is not true of other domestic creatures. Even the water bird should have dry quarters in which to roost.

It is a well-established fact that the heat required of the animal's body to dry its wet coat or damp bedding comes from the same source as does the fat. Thus the fattening process is retarded by unsheltered quarters. Furthermore, comfortable quarters will induce an animal to lie down more freely, preventing unnecessary exercise and a waste of fat already formed. A shelter, also, plays an important part as a windbreak. Wind takes more heat from the body than still air of the same temperature and humidity.

With the Right Influence.

When a boy sees only the best in agriculture and learns to do the work properly; when every study keeps his mind eager for better methods and better living; when every influence is *landward*, he isn't likely to long for the cities, is he?

When a girl learns to do housework properly she discovers it is not drudgery.

They'll go back to the farms, these boys and girls, because they've lived four years with the right influence; an influence that kept their minds in the right channel.

Worth supporting, isn't it?

planting parkings and small vacant spaces with flowers and help them by protecting their gardens.

Having given the children something to do, try to find something by which you can help the town. "Tin can" days might be organized. Have the mayor set aside certain days for a general cleaning. Pile all refuse in the alleys, and have wagons, hired by the city or lent by some enterprising citizen, to haul it away.

Keep the business district clean. Wash the windows once in a while. Paint the buildings. Plant vines, trees, bushes, and flowers. Build new sidewalks and keep the old ones in repair. Offer prizes for the best yards, the neatest street, and the cleanest

yield for several years, as reported by the farmers, of the wheat inspected by agents of the agricultural college is 22 bushels. This eight-bushel increase can be traced to better farming. The agents not only have inspected the wheat, but also have told the farmers of the best methods of soil preparation and harvesting.

The Kansas Millers' Association has paid the expenses of this work in the past. But its members believe they have done their share. It is believed, also, that it would pay to extend the inspection to corn and other crops and to other phases of farm management.

THE KANSAS INDUSTRIALIST

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PRES. H. J. WATERS.....Editor-in-chief
PROF. C. J. DILLON.....Managing Editor
DR. J. D. WALTERS.....Local Editor

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THE PLANS FOR SPRING.

The college plans for spring, described elsewhere in this paper, and the announcement by President Waters, last week, of a summer school for teachers, are striking examples of the broad scope of usefulness designed for the institution by an administration that is thoroughly progressive. Both these departments of activity are of exceptional importance to the entire state. They will provide instruction impossible to impart in any other way or at any other place. It would be hard to imagine any arrangement better designed to realize the highest and most valuable relationship, on a common-sense basis, between the people and the college. And this program, it should be borne in mind, was prepared last fall without any regard to legislative eventualities, as part and parcel of the regular work of a properly managed agricultural college.

President Waters has long and consistently advocated the teaching of primary agriculture in the state's grade schools. In no other way, he has insisted, can a boy begin his life properly if he is to remain on the farm. Under no other auspices can he receive the favorable impression absolutely necessary in the outset of his career if that career is to involve modern agriculture. In no other way can farm life be made more attractive. To teach agriculture in the high schools, President Waters believes, is to lay the plan too late. In brief, he would have farming taught as near the farms as it is possible to teach it, safe from influences of town or city so likely to affect the lives of boys or girls at their most impressionable age.

To give every teacher the best possible chance to study the most important branches of agriculture, the President has devised two terms of instruction for teachers: spring and summer. In the first the student may participate in the actual work—the beginnings—of farm activities, the soil preparation, and the planting on the college farm. No theory in this kind of education. It is the exact science of agriculture as it is here conducted successfully, the yields proving the value and the truth of every act and word, the kind of first-hand instruction that every rural school-teacher should have, and ultimately must have, as a prerequisite to appointment.

But these teachers need not confine themselves to soils and crops and stock judging. They will find available, also, complete courses in domestic science and home economics of the most practicable kind, a carefully designed short course, rich in the studies that will be of incalculable importance in their work. This will be true, also, of the summer term, except that this will be arranged upon a scale slightly more elaborate.

And for this golden opportunity the teachers will be required to pay only the fees required by law. Moreover, the spring and summer schools will be open to teachers from other schools upon payment of the customary amount, the whole clearly set out in the President's circular.

The spring plans for the extension department outlined by Superintendent

Miller are no less interesting. To quote the Superintendent's words: The people of Kansas who are not to be reached and helped in one way or another by the college in 1911 would better move out of the state. No more comprehensive program ever has been prepared. It includes, among other very important details, a complete schedule of movable schools of cooking and home economics generally.

With approximately 2,500 boys and girls in the college, a corps of competent instructors lecturing and demonstrating throughout the state in more than 300 farmers' institutes, and the faculty teaching the teachers of the rural schools, the usefulness of the agricultural college seems definitely assured.

SHOWING THEM.

That which a man sees he believes. When a visitor finds several pens of cattle or hogs of the same age and breeding, but showing, in a very striking difference in development, the effects of several feeding experiments, that visitor knows that information of great significance, of much economic importance, is being recorded. If ever he ridiculed science in animal husbandry or sneered at book farming he goes away converted.

When a visitor goes to the conservatories and there sees chinch-bugs and Hessian flies and grasshoppers and other insect enemies in glass cages, living in conditions identical as to temperature and vegetation with field conditions on the farms where their species have done so much damage, another fact has been established. The visitor knows, perhaps for the first time, that entomology covers a multitude of bugs and that science is shadowing the enemies of profit and contentment the better to destroy them when their habits are no longer secrets. He sees the growing wheat, the bugs, the remedies, and the men who know how to work and work right. You will never hear another word of ridicule from that man's lips. He knows what he has seen and that settles it.

Obviously there is nothing so convincing as a concrete demonstration. Many persons know nothing, except from reading, of the elaborate methods of field tests until they see different plots on the college farm and hear the results. They have no conception of the meaning of engineering until they see a hundred boys at forges making tools and machinery used daily on every farm, or measuring and sawing and hammering in the wood-working rooms creating the things that every boy and man should know how to make. Engineering is a mystery no longer when these visitors find interested groups of boys around gas and gasoline engines and traction engines and farm machinery and see them taking them apart and building and rebuilding, or making castings of iron or brass, or drawing plans for bridges and barns and highways. These things mean something. Chiefly and primarily they drive home the indubitable fact that the farmers of the future will have a lot of knowledge that farmers of the past have missed. And they mean that in a well-managed agricultural college no student will go away with any confused idea about the relationship between heads and hands or the dignity of labor.

PSYCHOHIPPIATRICS.

Hypnotize your horse the next time he becomes balky. If it develops a tendency to lower the 2:20 record every time it smells gasoline, hypnotize it just the same. Does the horse shy? Does it kick? Does it bite? In short, does it seem to lack common horse-sense?

Psychohippiatrics is the very latest; and, more wonderful to relate, it did not originate in the Chicago University, but came directly from Berlin. According to a professor in that city, the process of treatment is simple. Anyone who will follow directions can reform the most wayward animal. Suppose the horse becomes frightened easily at sudden noises. Lead it into the laboratory and lock its head to a stanchion.

This is where the "suggestion" enters. Tie in front of the horse, so

A Golden Text.

Shew thy marvelous loving kindness . . . Keep me as the apple of the eye, hide me under the shadow of thy wings.—Psalms 17:7, 8.

that it can look at nothing else, an animal so trustworthy and placid that the crack of doom could not disturb its dreaming. Then introduce your orchestra. The professor asserts that "music has a powerful, sedative effect, and especially aids the process of suggestion upon animals."

Now, just as the symphony is drawing to its close, place a lighted cannon-cracker beneath your subject, seize it by the ears, taking care not to obstruct its view of the other horse, and concentrate your mind upon thoughts of "peace" and "quietness." After the smoke has cleared away and the violin has been freshly tuned, repeat the experiment—provided the laboratory has not been kicked out of town.

The German professor has developed his theory far beyond this simple experiment, however. He declares that he has successfully treated cases of physical, rather than nervous, origin, as, for example, spavin and foundering. But whether he is believed or not, the world must at least give him credit for adding to the vocabulary the liquid term psychohippiatrics. That alone is worth the price of admission.

S. A. B.

CARRYING THE MESSAGE.

What an exciting session it was, last Wednesday, when the Women's Athenæum, of Kansas City, met in a fashionable Linwood Boulevard church to hear Prof. Doane lecture on "Farm Management!" Prof. Doane, you know, represents jointly the United States Department of Agriculture and the Missouri Agricultural College. He knows his subject and also he is a competent and interesting talker. The only excuse here for exciting one's risibilities is the idea of any busy man, with important things to discuss, talking to the Current Events section of an organization like the Athenæum. An old reporter, familiar with the eccentricities of some of its leaders, finds humor in contemplating the president of this bespectacled outfit, grave and austere, presiding and trying hard to look wise about the details of farm management.

Probably not ten women in the Athenæum ever saw a farm or ever will. Not more than that number could distinguish between a hay-rake and a binder. Agricultural colleges waste money and time in lecturing in that atmosphere when a world of eager ears is waiting for the news of modern farming. Can't you hear the president, at the end of Prof. Doane's talk, saying, "I'm sure I voice the sentiments of every member of the Athenæum, especially the Browning and the Emerson sections, when I say we have enjoyed Prof. Doane's lecture on—on—ah—on 'Farm Management.' We will now discuss the question of the 'Investigation into Certain Phenomena Contemporaneous with the Latest Aspect of the Impersonification of Hereditary Tendencies.'"

PAWNEE COUNTY'S PROJECT.

The farmers of Pawnee county propose to grind their own wheat in their own mill at Larned and sell their own flour. Could anything be more sensible? This is getting into line excellently. Carried to a satisfactory result, the operating of this flour mill would be a mighty influence in maintaining the fertility of Pawnee county wheat lands, for it would encourage the breeding of live stock to eat the bran and the shorts that now are going in too large volume to other states where, probably, 30 or 32 per cent of Kansas wheat is ground into flour.

In another way the project is of far-reaching importance to farmers. It proposes a coöperative enterprise entirely practicable and very often successful. Properly conducted, the flour mill at Larned will be a business addition to the town of big import; but, more than all, it will give the wheat growers a fair reward for their labor

and in doing so wipe out two or three profits before the flour reaches the consumer.

WITH ONE BLOW.

From the Hutchinson News.

The editor of Collier's, who came to Kansas with a "message," was another illustration of what a fool a man can make of himself if nobody interferes.

Ed. Howe's new magazine will be printed on the 22nd of February and the day will be a legal holiday in Kansas.

A PROPHET'S BUSINESS.

President Sanders, of Washburn, Explains Just What It Means.

"The business of a prophet is to prepare men for the life of their day and generation," said Frank Knight Sanders, president of Washburn College, speaking to the students at assembly Saturday morning. "We are accustomed to thinking of a prophet as one who tells the people of what is to happen later on. But the prophet of to-day has a wider field of service than this. He must be a far-sighted person, looking ever into the future, with a broad and clear vision. His mission is not to induce the people to prepare for by and by, but to teach them how to live every day. His first duty is to interpret God and to show what manhood and womanhood mean; to reveal the relation of God and man; how God and man and the universe can get together and act together in the broad issues of life. Prophets are useful factors, and are needed the same to-day as ever. It is fortunate for the world that they appear when most needed. Too many men appear contented with narrow views of life and live selfishly. They need to be stirred to the larger things and to be inspired to unselfish actions. The prophets of our country are raising up bands of men and women who stand for the best things in the world."

The prophet of to-day, President Sanders said, must have a broad, clear vision, an unselfish heart, high ideals, and a great love of humanity. He must possess the spirit of the martyr, for he will encounter all sorts of unselfish interests, if he would lead the people into broader views and a more unselfish democracy. Almost as good as being a prophet is to stand by one. "He that receiveth a prophet in the name of a prophet shall receive a prophet's reward." In other words, he stands for the same high ideals and the same great results. He who recognizes the prophetic spirit and understands it, accepts the leadership, sympathizes with the ideals, aids in their success, and receives the reward of a growth of all that is best in him. "Get into the prophetic spirit," the speaker said, "and that spirit will be the guiding influence, not only of your life, but of the lives around you."

FOOLING THE THEATER PEST.

The Dunbars Said Good Night Before Coats and Hats Were On.

The Dunbar Male Quartet "beat the audience to it" Tuesday night. Here, as in nine-tenths of the towns and cities of free and liberty-loving America, the audience puts on its wraps and scuffles out noisily while the hero and heroine are preparing to be happy ever afterward, or, if it is a concert, while the last number is being played. The Dunbars fooled Manhattan. At the end of a particularly pleasing piece, while everyone was sitting snug and placid, and the girl in front was telling how much better she had heard it done in Clay Center or Moundridge, the company stepped forward, said "Good night," pleasantly, and started for the train. It must have worried a lot of people to put on hats and coats without an accompaniment.

The Dunbars have appeared as one of the lecture course numbers several times in past seasons. They are very popular with the college and Manhattan. They are especially noted for their ability as bell ringers. The Christmas song and several other old songs were especially well rendered. Ralph Dunbar, the 'cello soloist, probably made the greatest hit with the audience.

To His Wife.

(Topeka, February 14, '11.)

I'm wondering how you're faring, dear. I long to touch your hand; I pine For just a word, to feel that I am missed, And that you're still the same.

My Valentine.

I'm thinking of the dear, old farm to-night—No legislator, love, can save a dime—I wonder if the boys are keeping straight And doing up the chores,

My Valentine.

It may be I'll come home again—some day. I do not know, and so I send this line. Old age is creeping onward fast, my dear, I'm longing for a rest,

My Valentine.

Our little stage: the Senate and the House; What one will do the other will decline. I sigh and watch the clock, my own, And hope that they'll adjourn,

My Valentine.

—C. D.

SUNFLOWERS.

"Whipping Post Revived," shrieks the *Capital*. How about the unhappy victim?

"The small tots" broke in a certain Kansas City paper last Tuesday. Isn't it awful?

If it isn't asking too much, would Brother House please say why it is called a chafing-dish?

Ed. Howe's drama displayed what Mrs. Malaprop called a "supercilious knowledge" of stage requirements.

Dr. Hyde's curtain, *The Star* says, has been torn down. This is certainly sufficient reason to reverse the case.

Pearls have been found in Cow creek near Hutchinson by farmers. This is what might be called mussel exercise.

Charles H. Strong has been convicted in Kansas City of selling eggs illegally. Perhaps they were Strong eggs.

Farming, says one of the students, really isn't worth while unless you are continually striving for something better.

Henry J. Allen's war record went all right as a topic at the Santa Fé luncheon in Topeka. But how about a campaign?

Only five banks in Kansas were robbed this week. The protective association is doing fine work. The police have been notified.

And what has become of the old-time castor, the combination fixture that held the vinegar and mustard and salt and pepper and other things.

"Solved by the Silo," a head in the Hutchinson News, may be alliterative, but it certainly is strong. Hon. Morgan must have a farmer on the staff.

Mayor Thorstenberg, of Lindsborg, has served twelve terms in that office. Now, just as the people are used to him, he refuses to run again. However,—

Now some evil-minded persons desire to move the capitol from Jefferson City. The owner of the Madison house should apply for a writ of *certiorari* or *quo warranto* or some such thing.

A physician in Santa Rosa, California, used dynamite to blow up a tent. Now he goes to the penitentiary for ten years. He deserves it. Why didn't he let the wind blow it down?

Item from Forty Years Ago in *The Star*: A snow plow has been placed on the Central Branch railway. This is the same plow Comrade Blakesley rode on last summer when he investigated the branch.

Col. John Grahame Hope de la Poer Horsley Beresford, Baron Decies, etc., and Miss Vivian Gould rehearsed their marriage last Monday, the day before the actual disturbance. The next rehearsal will be arranged by the lawyers and the judge.

A. E. Stilwell now 'lopes down the pike with another book, "Universal Peace." This makes two. Next you hear of Arthur he'll be out with a book of verse, one of short stories, and then a play, produced for the first time on any stage in Topeka.

"I'd hate to hev money and live in Kansas City, Mother," said Bill Silage, as he lighted his after-supper corn cob. "They want \$100,000 now for conventions. About the time a man gets a few dollars up there the Merciless hospital or some other institution gits up a tag day and takes it away from him. A man with money in Kansas City, Mother, is like a volcano in the South Seas—always coughin' up, by vum."

LOCAL NOTES.

George Martin, a student here in 1891, visited the college lately.

James W. Searson will give an address at Alma, Kansas, February 24.

Leslie A. Fitz, professor of milling industry, is in Kansas City on business.

The students in the short course had a party in the Women's Gymnasium last Monday night.

A contest in target shooting probably will be held this term between the several companies of the cadet corps.

B. F. Eyer, professor of electrical engineering, was in Horton last week inspecting the city electric light and water-plant.

Herbert Ratcliffe, a subfreshman from Ellsworth county, is ill with typhoid. His mother has come to Manhattan to care for him.

Arrangements are being made at Topeka for a K. S. A. C. alumni banquet, to be held March 3. The banquet will be given at the Commercial Club Hall.

The class in serum therapy now has an enrolment of 26. This is an elective study and Dr. Francis H. Slack is agreeably surprised that so many desire to take it.

W. A. McKeever, professor of psychology, addressed the Kansas Bible institute at Topeka, Tuesday afternoon, on "New Ideals of Christian Manhood." Arthur Capper, member of the board of regents, and owner of the *Topeka Capital*, spoke on "The Modern Newspaper," Tuesday evening.

C. E. Downton, superintendent of the electrical department of the Westinghouse Electric and Manufacturing Company, Pittsburg, Pennsylvania, gave an illustrated lecture to the engineering students last Saturday. He discussed the apprentice courses for electrical engineers as given by the Westinghouse company at Pittsburg.

Thornton Hayes, assistant in the machine shops, and B. S. Orr, assistant in power and experimental engineering, went to Hays Friday to make preparations for a test of the heat and power plant at the Hays branch of the State Normal, which has been installed recently. The test will be carried on by the electrical and mechanical engineering departments of the Kansas State Agricultural College. Mr. Hayes returned Monday noon.

ALUMNI NOTES.

Dr. Herbert R. Groome, '07, was visiting the college lately. Dr. Groome is practicing at Jewell, Kansas.

George Wolf, E. E. '05, has been given an important position with the Kellogg Telephone Company, Chicago.

Mrs. Ella (Vincent) McCormick died February 2 at her home in Clay Center, Kansas. Mrs. McCormick was graduated with the class of '79.

Mr. and Mrs. A. C. Ferris, of Syracuse, Kansas, announce the birth of a daughter, February 1. Mr. Ferris was graduated with the class of '06.

Mr. and Mrs. J. A. Conover, Raleigh, North Carolina, announce the arrival of Alfred Ray Conover, January 27. Mr. Conover was graduated with the class of '98.

W. S. Davison, '10, a member of last year's debating team, attended the oratorical contest last Saturday. Mr. Davison is farming near Michigan Valley, Kansas.

K. C. Manny, '10, has sent a box of fruit to the horticultural department, for use in the class in citrus pomology. Mr. Manny lives in Los Angeles, California.

J. L. Pelham, '07, superintendent of the Underwood Orchards at Hutchinson, Kansas, was a recent college visitor. Mr. Pelham lectured to several classes while here. He has been very successful with orchard heating and the Underwood Company will equip 300 acres in the manner which Mr. Pelham has tried.

Miss Christine Heim, Miss Wilma Orem, Charles Zoller, and W. S. Davison, all '10, attended the recent oratorical contest here.

R. C. Thompson, '08, for two years assistant chemist in the experiment station here and later first assistant chemist in the Arkansas experiment station, writes that he is now at the head of the chemical work in that station. He enjoys his work there and welcomes the weekly visits of THE KANSAS INDUSTRIALIST.

THE ALUMNI IN WASHINGTON.

The Washington branch of the college Alumni Association held its annual reunion January 28 at the home of Mr. and Mrs. Charles I. Marlatt, 1521 Sixteenth Street, Washington, D. C. After an hour or more devoted to renewing old acquaintance, the Iocalphawebham literary society was called to order by President J. B. S. Norton and a special program given. The reading of fictitious minutes afforded the secretary an opportunity to spring some jokes and near-jokes on the various members, which were appreciated according to their quality. After a short business session in which no business was transacted, the literary program was taken up.

The question, "Resolved, that the large redwood stump on the grounds of the United States Department of Agriculture grew where it now stands," was argued in the affirmative by Prof. George H. Failyer. By references from the Scriptures and early American history, as well as by the logic of Aristotle, Prof. Failyer proved conclusively that the stump did grow where it now stands. To clinch his argument he showed some green ivy leaves plucked from the stump that evening. W. R. Spilman, the speaker for the negative, was equally convincing in his argument, he having taken advantage of a convenient sewer to explore underneath the stump and found that it had no roots or other attachment to the ground. The judges were unanimous in their decision that both speakers had won the debate. The Iocalphawebham "Reporter," a journal devoted to the promulgation of fakes, fads and fancies, was read by A. B. Gahan. In this journal many of the members received personal mention and learned things about themselves that they did not know before.

Under the head of extemporaneous speaking, H. V. Harlan spoke on the question, but did not explain, "How shall the Philippines dispose of the United States?" C. P. Hartley could not tell how he happened to look like Daniel Webster and denied the allegation. David G. Fairchild, having for a subject, "Shotan Arabin Boombabarabas," told of some of his experiences in the Far East, but vehemently asserted that he had never shot an Arab anywhere, and accused Mr. Marlatt of rejuvenating an alleged joke which should have died many years ago.

One of the features of the evening was the singing by a quartet composed of J. B. S. Norton, A. L. Halstead, W. R. Ballard, and Roland McKee. The program was finished with piano music by Mrs. Bessie (Nicolet) Cron and Mrs. Mamie (Helder) Halstead. Following the program, a buffet luncheon was served. Those present were: Mrs. George W. Marlatt, Manhattan, Kansas; Charles L. Marlatt, '84, and Mrs. Marlatt; David G. Fairchild, '88, and Mrs. Fairchild; Lewis W. Call, '83, and Mrs. Call; C. P. Hartley, '92, and Mrs. Hartley; A. L. Halstead, '03, and Mamie (Helder) Halstead, '04; H. V. Harlan, '04, and Augusta (Griffing) Harlan, '04; A. B. Cron, '08, and Bessie (Nicolet) Cron, '07; Ernest L. Adams, '07, and Lulu (Rannels) Adams, '07; Harry Umberger, '05, and Mrs. Umberger; Mr. and Mrs. A. L. Hitchcock; Mr. and Mrs. W. R. Spilman; Mr. and Mrs. J. F. Strauss; Mr. and Mrs. J. H. Corbett; Miss Julia R. Pearce, '90; Miss Winifred Gahan; Miss Jessie E. Minis; W. R. Ballard, '05; V. L. Cory, '04; G. H. Failyer, '77; J. B. Norton, '96; Roland McKee, '00; C. H. Popenoe, '05; A. B. Gahan, '03; and J. F. Ross.

CAREFUL OF THE CHICKS

HERE'S AN EMULSION AND DIRECTIONS FOR DUST BATHS.

You Can't Rear Poultry with Any Profit if You Don't Keep the Fowls Clean—A Few Suggestions for Guidance.

In the spring, when the weather is warm and damp, you are quite likely to find lice on your poultry, especially if your hen-houses have not been kept clean. Lice are very destructive to young chickens and should be killed at once. If you adopt the following method you may kill the lice at once and probably keep them from returning. Of course, the first thing to do is to clean the hen-house and spray it with kerosene emulsion. The older fowls should have a dust bath, and the chickens should be greased with carbolated vasolene. To keep the lice from returning you should provide a dust wallow for the flock.

Here is the formula for making the kerosene emulsion:

Kerosene.....2 gal.
Water.....1 gal.
Soap.....1 lb.

Cut soap finely and dissolve in boiling water. While boiling, but away from the fire, add the kerosene. Stir rapidly. The emulsion will have the consistency of rich cream. When ready to use, dilute by using nine gallons of water to one gallon of emulsion.

A dust bath is made with this mixture:

Kerosene.....1 pint
Gasoline.....1 pint
Plaster of Paris.....2 1/2 lbs.

Mix kerosene and gasoline together and stir slowly and thoroughly into the plaster of Paris. When thoroughly mixed, sift through a common door screen to remove all lumps. This dust should be shaken into the feathers of the fowl, especially around the base of the tail and under the wings.

A dust wallow is made by mixing equal parts of fine coal ashes and land plaster. Wood ashes should not be used, as they will irritate the tender skin of the fowls. A setting hen should be thoroughly dusted before being placed on her nest and a day or two before hatching her brood.

POULTRY DROPPINGS VALUABLE.

But You Must Be Careful in Applying This Kind of Fertilizer.

Poultry manure has twice the value of horse or cow manure. It is especially valuable for corn soil, since it possesses a large per cent of available nitrogen, the element required in greatest quantities. It is a good manure for hotbeds. But this manure must not be applied to growing plants; it will injure them. It must be worked into the soil before planting.

If poultry manure can be obtained in abundance it will be a temptation to load it on a manure spreader and haul it to the field. But no manure spreader can handle it successfully unless it is mixed with coarse cow or horse manure. It is better to follow the old "armstrong" method—apply it by shoveling from the ordinary wagon. This gives you the advantage of controlling the thickness of application.

The field should not be plowed very deeply after the manure is applied. It would be much better to harrow it in, but a shallow plowing is satisfactory.

Many piles of hen manure are allowed to go to waste on the farm because the results from its application were not satisfactory. If applied according to these instructions, bearing in mind that it is rich in nitrogen, the increased production will be gratifying.

KEMP'S GARDENING REVISED.

F. A. Waugh Has Adapted a Famous Book to American Conditions.

"Landscape Gardening, How to Lay Out a Garden" is a particularly valuable book for everyone owning or expecting to own a home. The work is the fourth edition of the book by Edward Kemp, who died at Birkenhead, Liverpool, in 1891. It is made especially interesting on this side of the Atlantic because of the excellent editing

by F. A. Waugh, professor of landscape gardening in the Massachusetts Agricultural College. Prof. Waugh has revised and adapted the book to North American conditions and so has given it usefulness heretofore denied it here.

There are twenty chapters and seventy-nine illustrations in the new "Kemp's Landscape Gardening." One could scarcely go wrong in following the suggestions so delightfully presented. Indeed, the desire to plant and trim and gather grows in the reader from page to page. The book plates show almost every conceivable kind of plan.

The book is beautifully printed by John Wiley & Sons, scientific publishers, New York; price, \$1.50 net.

THREE MEALS FOR FOUR.

The Things Here Mentioned as Suggestions Cost Only \$1.20.

Good meals do not necessarily mean high prices. You can enjoy such meals as this with a clear conscience, so far as the cost of the food goes. These three meals can be served to four persons for \$1.20. Isn't that reasonable enough?

BREAKFAST

Rice with Raisins Cream
Boiled Eggs Muffins with Butter
Coffee

DINNER

Meat Loaf with Tomato Sauce
Creamed Onions Baked Potatoes
Bread and Butter Peach Pickles

SUPPER

Corn Chowder
Fruit Salad Bread and Butter Sandwiches
Snow Pudding Tea
Cake

DR. WALTERS' GOOD RECORD.

Not a Day Lost from Instruction in More Than 34 Years.

Dr. J. D. Walters, senior member of the faculty, had a serious time with the grippe last week and was forced to stay away from his classes for two days. He returned to his work Saturday. This is the first time the doctor has missed a whole day on account of illness or private business in more than 34 years. About 25 years ago he poisoned his face with ivy and stayed away from his classes for an afternoon, but he did not lose the whole day. In 1889 he was compelled to remain at home for a number of days during the Christmas vacation, with bronchitis. But before the opening of the winter term he recovered and lost no instruction time. During all these years the doctor has taken no medicine, with the exception of a few doses of quinine.

DO YOU USE TRAP NESTS?

The Only Way to Determine Which Hens Are Paying Their Board.

How many hens are you keeping that do not lay enough eggs to pay for their feed? When you sell your hens, do you know whether you are selling the laying hens or the hens that do not lay? You should know, and the only way to know is to use trap nests and keep a record of every hen.

The best trap nest, and the only practicable one, is that in which the hen shuts the door as she enters. These nests are simple in construction. They should be built so that the door swings out. When it is open it forms a landing place for the hen to jump upon before entering the nest. When the door is closed, the bottom will be level and the hen cannot escape until released. The nest itself is in the back part of the box.

All hens should be marked with leg bands. This makes it easy to keep a record of the eggs laid and the hens that lay. And keep the record as you should keep an account of every cow.

A Picture of the Cadets.

The cadet corps was photographed last Tuesday in all its brightest regalia. The picture is to be used in the class book.

HOW TO REAR A CALF.

SOME GOOD ADVICE ON THIS IMPORTANT SUBJECT.

Give the Animal Whole Milk at First and Gradually Change to Skim-Milk—Feed a Little Grain and Some Bright Alfalfa Hay.

Did you ever rear a calf? After it has run with the cow long enough to have consumed the first milk, which takes two or three days, it is best to wean it and feed it by hand.

In teaching the calf to drink, place two fingers in its mouth and at the proper moment withdraw them and put its head into the bucket of milk. After a few lessons the calf will soon learn to drink.

It should be fed whole milk for about four weeks before you add any grain or skim-milk. The milk should be fed to the calf warm; that is, with the animal heat still in it.

The calf should be fed about four quarts of whole milk a day at first. After about three weeks one quart of skimmed milk may be added. This skimmed milk should be warmed. About a teaspoonful of oil meal should be added to the milk.

USE CARE IN FEEDING.

Care should be taken that the calf is not fed warm milk one time and cold milk the next, for this is almost sure to produce the scours. In case the calf does get the scours it should be fed ground dried blood, in doses of a teaspoonful to a feed, until the trouble has stopped. This dried blood is sold at most feed stores. In case it cannot be obtained a tablespoonful of common salt will be found very effective.

Teach the calf to eat grain after it is four or five weeks old. Let it go without one feed of milk, so it will be hungry, and place a few grains in the calf's mouth. If you hold up its head it soon learns to chew the grain.

Corn should be placed in a box so that the calf can reach it. All the corn that the calf will eat up clean should be fed. In case more corn is fed than the calf will consume the box or trough should be cleaned before the next feed. Calves will not eat so much if there is any feed left over.

ADD SKIM-MILK SLOWLY.

The increase of the skim-milk should be gradual until the calf is about seven weeks old, when it should be receiving only skim-milk. The feeder must be governed by the size of the calf and its growth, but the average calf should receive about eight quarts daily when it is eight weeks old. When the calf is fed twice a day it will drink more milk than is needed, if it has a chance.

If the calf is born in the late fall or winter it should have access to bright alfalfa or clover hay. The stall should be kept clean. Plenty of clean straw should be used for bedding. The calf should have access to a lot large enough for exercise and sunshine.

If the calf is born late in the spring it should have access to a good pasture. Good, cool water should be supplied. Alfalfa or clover makes excellent pasture for young calves.

A CARELESS DAIRYMAN.

Commissioner Wilson Puts Them Out of Business in Haste.

Everyone deplores slipshod and careless ways of keeping up, or rather neglecting, the yard and the sanitary conditions. But some farmers are careless or indifferent. A certain man in Kansas had a well just as close to the barn as he could put it. The water from the well was used for washing the dairy cans. D. M. Wilson, state dairy commissioner, discovered this condition and the man sells no more milk. Forty cows are on that farm, too.

It can readily be seen from the sediment in a sample of the water obtained by Commissioner Wilson that the water is impure. The water is being examined by bacteriologists to learn if any of the illness in that neighborhood has been due to this impure milk.

There is no joy in life equal to the joy of putting salt on the tail of an idea.—*Fra Eubertus.*

VEGETABLES IN WINTER.

YOU CAN STORE YOUR SUMMER GARDEN PRODUCTS IF YOU KNOW HOW.

They May Be Kept in the Cellar, an Outside Cave or a Trench If You Understand the Proper Methods.

The fact that vegetables can be stored for a long time without losing any of their desirable qualities is a good reason why this subject should receive more careful consideration.

Storing vegetables in the cellar is the most common method. Potatoes, onions and turnips will keep well if kept in a cool, dry place, but when a furnace is in the cellar they will not keep so well. This difficulty can be overcome by building a tight partition between the furnace and vegetable rooms, thus insuring a more even temperature, which is one of the most essential points in vegetable storing.

A good cave makes an ideal place to store vegetables, because the temperature can be regulated and the vegetables will not dry out as quickly as in a cellar. The cave can also be used to good advantage during the season when vegetables are not stored.

Another good way to store vegetables is to dig a trench and line with a thin coat of hay or straw. Be sure that the vegetables are in perfect condition when you place them in the trench. The trench should be made deep so that the vegetables will be at least nine to twelve inches in the earth. Put a thick coat of straw on them, then some boards, and cover with earth. If the weather becomes real cold put on a coat of fresh horse manure.

Turnips, salsify and parsnips keep better if kept covered with earth, and where they cannot dry out. The trench method gives very good results.

Some gardeners prefer to leave parsnips and salsify in the ground where they grew and cover them with straw or manure. This is all right where the ground does not freeze very hard, but where there is much freezing it would be much more satisfactory to get these vegetables from your trench or cave where they could be covered with earth.

BARLEY, OATS, OR WHEAT?

Little Difference in the Amount of Plant-Food Taken Up.

Is barley as hard on ground as oats or wheat? There is little difference in the amount of plant-food actually taken up. Phosphorus is the food most likely to be exhausted, and barley takes one-tenth of a pound in one thousand pounds of grain more than oats or wheat. On other substances the analysis shows only about that difference and it is about as often in favor of one as the other.

There is one peculiarity of barley which is likely to cause farmers to believe it is hard on the soil: It is a quick-growing crop. It must gain its substance in a short time, and for that reason it soon exhausts the readily available plant-food. When this is done it ceases to flourish, though there may be an abundance of fertility in the soil.

This also accounts for its quick response to the action of fertilizers. In the freshly applied manure there is a large portion of plant-food. Barley rotates well with wheat and corn. Some legume should be introduced frequently.

DON'T FORGET THE PRUNING.

A Few Hints for Neglectful Orchardists—When and How.

One of the best methods for growing better apples is to prune your orchard. If you prune an orchard, you do three things: you grow more and better apples; your apples are easier to pick, and your orchard is much easier to cultivate.

Trees should be pruned when they are first transplanted. This is the most ideal time to start the pruning. If a tree is pruned back to the trunk and transplanted it will grow and produce fruit much superior in quantity and quality to those trees not cut back.

It is often said that the best time to prune an orchard is when your prun-

ing-knife is sharp. While this is not the correct practice, it is much better to prune a tree when you have the time than to neglect it and not prune it at all.

It has been a general practice for horticulturists to prune the trees in the winter. This has its advantages and disadvantages. You generally have more time in the winter, the leaves are not in the way, and there is no danger of knocking off the buds. But the main disadvantage is that the wounds made by pruning in the winter are much harder to heal than those made in summer.

The limbs that should be removed depends on the general shape of the tree and the condition of the limb. Limbs that show signs of disease should be cut off. Limbs that cause the tree to become crowded should be cut away. If limbs are very large crude linseed-oil is used for covering the wounds.

BUT DO NOT ENLIST.

Drill, Capt. Boice Says, Is Intended for Another Purpose.

Military training is beneficial to every university that includes drill in the course of study, said Charles A. Boice, captain Eighth Cavalry, U. S. A., in speaking in student assembly recently. Military training is of national significance. Why? Because the volunteers have won every war that the United States has fought.

Military training in this or in any other land-grant college is not designed to induce college students to join the regular army.

"Indeed," said Captain Boice, "I should be ashamed if any of the young men here should go over to Fort Riley and enlist in the regular army, simply because of the military training received here. Because your parents expect something higher of you. But in case of war, I do hope that the graduates of this college will respond to the call for soldiers."

"Military training brings out obedience, loyalty and discipline. Obedience and discipline can be taught, loyalty must be inherent. Military training in colleges is a way of preparing for war in times of peace."

FOR BETTER FEED RACKS.

A Few Good Suggestions for Saving Your High-Priced Feed.

Do your cattle waste their hay? What kind of a feed-rack have you? You can't afford to let them waste any ten- or twelve-dollar hay. Many farmers waste enough hay in one year to pay for several feed-racks. Look ahead a little and don't let the present cost bother you if you can see a return in the future.

Here is the kind of a feed-rack that will help you to buy an automobile later on. Make a wedge-shaped form for your rack, nail the ends up solid and leave the top open. Nail the slats vertically, a few inches apart, on the sides. Now place this in a box, built around it. The sides of this box may be either solid or the boards a few inches apart. This form of a rack prevents waste because the hay which drops when the steer pulls out a mouthful falls into this box and will be eaten when the rack is empty. Of course there is no feed-rack which is absolute proof against waste, but the one described comes about as near being perfect as possible.

Another important point in connection with the feed-rack is the location. Always try to put your rack where the ground slopes, so that the water may not stand there after a rain. Mud-holes around a feed-rack are very disagreeable for the cattle, especially in the winter, and also makes it difficult to get near with a wagon.

Make your cattle eat all the feed you give them and at the same time make them comfortable.

You Better Be Careful, Boys.

See the far-famed troupe of performing minstrels at the Auditorium at 8 o'clock next Monday night. They will have plenty of good songs, some new variations of the old buck and wing dance, bright-colored costumes, and plenty of jokes. They may even mention a professor or two.

USE MANURE SPREADERS.

THAT'S THE ANSWER TO A QUESTION HEARD IN WESTERN KANSAS.

It's a Bad Idea to Put This Form of Fertilizer on Corn Land Unless It Is Evenly Distributed—A Suggestion.

When a landowner in Western Kansas asks the question, "Should I Plant Corn on Recently Manured Land?" another question should be returned. This is, "Do you use a manure spreader?"

This is really the secret of his failure or success. Too many western farmers haul their manure out to the field in any old wagon and toss it out in heaps with a pitchfork. Now, manure spread upon the ground in this fashion will not only not help the land and the crops, but it will seriously injure them.

The soil of Western Kansas being naturally very dry, it is made more so by plowing the manure under or by spreading it in heaps by hand. As a rule, the land should be disked instead of plowed, after the manure has been spread evenly over the land with a manure spreader. When the manure is plowed under it makes the soil drier; in fact, fairly burns it out. If the farmers of that part of the state will use a little judgment and some of their Kansas cents as well as sense, they will have more success with their corn crops. Get the point? Buy a manure spreader; it will pay.

And then, although it can be and is done, it is not really the best plan to plant corn after recently applying manure to a field. The corn, being a rather late-maturing crop, ripens at the height of the dry season. This alone is hard enough on the corn without having a lot of heat-producing manure piled around it.

Why not plant wheat instead on this ground? Wheat is an earlier-maturing crop and is ready for harvest, as a rule, before the dry season is very far advanced, thus avoiding the adverse conditions of the natural drouth and the heat produced by the manure.

PLANTING A WINDBREAK.

White Scotch Pine, Catalpas and Russian Mulberry are Mentioned.

Farmers and stockmen, or anyone interested in soil cultivation, should be interested, also, in windbreaks. Their need is not restricted to any one part of the state. Few trees are better adapted to the farm to be used as windbreaks than the White or Scotch pine on the inside, placing them ten feet apart in rows; then, ten feet on the outside of these a row of catalpas, putting them about six to eight feet apart in the row. Plant a row of Russian mulberry outside of this at a distance sufficient to allow cultivation between the rows. These should be placed about two feet apart in the row.

Cultivate the trees thoroughly two or three times every season until they shade the ground or become too large to cultivate conveniently. A windbreak formed in this way is sure to give great satisfaction if properly tended. It will protect buildings and orchards for quite a distance from it.

By placing the mulberry on the outside you have trees that make a quick windbreak, which neither of the other trees will do. They also serve as a protection for the catalpas and pines, tending to pile the snow around the roots of the others, thus furnishing plenty of moisture. If necessary, after a few years the mulberry may be cut down and used for wood or posts. By that time the pines are large enough to furnish a windbreak. The catalpas may then be cut for posts. If this is done in winter or early spring the sprouts from the stumps will shoot up, thus insuring a permanent windbreak.

HOW TO STOCK A FARM.

This Plan is Proposed by a Young Student of Animal Husbandry.

A man cannot afford to keep stock on the farm that is unprofitable. On a farm of about 160 acres four mares will be sufficient to do the work and at the same time rear colts. One team

could have colts in the fall and the other in the spring. By this means there would always be a team to do the heavy work.

The average quarter-section will support twenty-five head of cows the year round, the calves being marketed every winter as baby beef.

With seven brood sows producing two litters a head, you should have 80 hogs to be marketed every year.

The combination farm of dairy and sheep would be a paying proposition. One hundred head of Dorset ewes will produce about one hundred and twenty-five lambs. They should come the last of September and be ready for market by the first of January. If well fed they should average from eighty to ninety pounds. "Hothouse" lambs sell for from ten to fifteen cents a pound. This department alone can be made a source of much revenue.

Twelve to fifteen good dairy cows could be milked during the winter. They could be turned dry in the spring when the farm work begins. One man could in this way work his farm with little additional help in the summer.

WHY WRITING WORRIES THESE

An Assistant in English Has Gathered Some Very Interesting Facts.

What words to use and how to spell them are the chief trouble that a big proportion of students of elementary rhetoric find in trying to write. So much is indicated by the answers of about forty students to the question, "What is your chief difficulty in writing?" which was asked of the members of two classes in rhetoric taught by N. A. Crawford, assistant in English. There are three classes in the subject. The investigation is of interest as representing exclusively the pupil's point of view.

Fourteen students mentioned an insufficient vocabulary as a main difficulty in writing, while nine put spelling in the same category. Punctuation was a close third, with eight students referring to it as a chief difficulty. Only one admitted that a lack of ideas was his main trouble in trying to write.

The replies are tabulated as follows, a number suggesting more than one difficulty:

Vocabulary.....	14
Spelling.....	9
Punctuation.....	8
Organization of thought.....	6
Sentence structure.....	5
Coherence.....	4
Paragraphing.....	3
Clearness.....	2
Unity.....	2
Choice of subject.....	2
Beginning in an interesting manner.....	1
Lack of ideas.....	1

HELP FOR DEBATERS.

Prof. Searson is Arranging a Reference Library for Their Use.

To write a debate means considerable hard, painstaking work. Debates, contrary to the belief that many persons have, are not written according to the personal opinion of the debater, but with the idea of proving a point and convincing others. No matter how strongly the debater may feel about a subject, unless he has facts and concrete examples the audience and the judges will not consider him an authority and a winning debater. He must collect material and examples that will give him the right to have his arguments listened to and considered.

As an aid in collecting such material, James W. Searson, associate professor of English, is preparing debating files. These files contain the best classified references obtainable on various debating questions. The references so collected are those that have been tried by others and have been found useful in preparing debates. Various library indexes are helpful in obtaining material. But the references given are not all the best. Nor are they classified in the same way that they will be in the debating files.

These files will be valuable in preparing a debate. Professor Searson will be glad to help anyone to get needed material. References on any debating question will be useful in the compiling of these data.

GIVE THE HENS A BATH.

GRIT, ALSO, IS A FINE ADDITION TO THE POULTRY YARD.

Provide Plenty of Sharp Stuff—Supply the Dust Bath in Winter—Keep Fresh Charcoal Before the Hen at All Times.

Have you ever given your hens what you considered ideal food and conditions and failed to obtain the results you thought ought to follow? This has often been the case, and because of it, thousands of inquiries have been sent poultry specialists. If the matter was investigated it would be found that the proper care and attention have not been given.

No poultryman would be likely to forget to supply water or provide proper shelter for his fowls, but there are many who neglect the minor items in poultry culture. Some of these minor items which are essential, but are often neglected, are grit, dust bath, and charcoal.

SUPPLY SHARP GRIT.

Grit is a necessary article for the hen. Hens have no teeth and the grit is a great aid in digestion. There are many different kinds of grit on the market at the present time. The hen prefers a sharp-cornered grit, and it can be secured at a reasonable price.

Where the fowls have free range much gravel, glass and other small articles are picked up which take the place of grit, but where many hens are kept, or where they are kept in confinement, it will pay to furnish some form of grit.

Did you ever happen to see hens wallowing in the loose dirt? Did they seem to be enjoying themselves? Why not furnish them with the same conditions during the cold, stormy days when they cannot retreat to their dust bath? Make the hen happy; that is the secret of success in poultry culture.

FURNISH A DUST BATH.

The dust bath should consist of very fine earth that is not too dry. When the hen has access to a good dust bath she will keep herself reasonably free from vermin. The bath also gives a lustre to the plumage of the fowl which is hard to obtain otherwise.

Charcoal can be used to a good advantage, as it aids in digestion and is considered a good blood purifier. This is an item well worth considering in growing poultry.

These seem like little things, but the little things make the big ones pay when they are combined properly.

BUYING A DAIRY COW.

A Student of the Subject Sets Forth the Principles to Follow.

In selecting a dairy cow there are many things to consider. First, it is a good plan to examine a cow carefully and determine its possibilities; and next learn if there is anything to interfere with the realization of these possibilities. The cow must have a good disposition and must also conform to typical dairy type.

A cow with a good constitution has a smooth, oily, coat, while one in poor condition has a coat that appears rough and dry. The general carriage of the cow is also a very good indication of its constitution. The disposition of a cow is shown in the eyes. A cow's disposition is a very important factor. The animal should be gentle and kind, and yet have the typical dairy, nervous temperament.

Well-developed milk-producing organs are essential. It is easy to distinguish the difference between a good milk factory and a poor one. The udder should be large, but not fleshy. The teats should be of good size. The milk veins should be large, and they should enter well forward and end in good-sized milk wells.

Every Day Business Rules.

R. J. Barnett, assistant professor of mathematics, spoke in chapel Tuesday. His subject was: "Everyday Business Pointers." The postal rules and rates, counting your change, and the saddening effect of overdrawing your bank account were the points Prof. Barnett discussed.